

12/380,780 | RALEP007 [26WV-160488]: AUTOMATED DEVICE PROVISIONING AND ACTIVATION

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Application #	Confirmation #	Attorney Docket #	Patent #	Filing or 371 (c) date	Status
12/380,780	1775	RALEP007 [26WV-160488]	8,839,388 Download PDF Text	03/02/2009	Patented Case 08/27/2014
			Issued - 09/16/2014		

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Continuity

Parent data

Application #	Description	Parent application #	Filing or 371 (c) date	Status	Patent #	AIA
12/380,780	Claims priority from a provisional application	61/206,354	01/28/2009	Expired	--	-
12/380,780	Claims priority from a provisional application	61/206,944	02/04/2009	Expired	--	-
12/380,780	Claims priority from a provisional application	61/207,393	02/10/2009	Expired	--	-
12/380,780	Claims priority from a provisional application	61/207,739	02/13/2009	Expired	--	-

Child data

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
13/248,028	09/28/2011	Patented	8924469	No	is a Continuation in-part of	12/380,780
13/441,821	04/06/2012	Patented	9755842	No	is a Continuation in-part of	12/380,780
13/748,152	01/23/2013	Patented	9557889	No	is a Continuation in-part of	12/380,780
13/941,310	07/12/2013	Patented	8745220	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
14/181,910	02/17/2014	Patented	9571559	No	is a Continuation in-part of	12/380,780
14/272,274	05/07/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/948,065	11/20/2015	Patented	10028144	No	is a Continuation in-part of	12/380,780
14/948,082	11/20/2015	Patented	10165447	No	is a Continuation in-part of	12/380,780
15/158,526	05/18/2016	Patented	10492102	No	is a Continuation in-part of	12/380,780
16/694,813	11/25/2019	Patented	11363496	No	is a Continuation in-part of	12/380,780
17/121,717	12/14/2020	Patented	11477246	No	is a Continuation in-part of	12/380,780
14/292,282	05/30/2014	Patented	9386165	No	is a Continuation in-part of	12/380,780
15/287,576	10/06/2016	Patented	10064033	No	is a Continuation in-part of	12/380,780
13/134,005	05/25/2011	Patented	8635335	No	is a Continuation in-part of	12/380,780
13/947,099	07/21/2013	Patented	10057775	No	is a Continuation in-part of	12/380,780
14/098,523	12/05/2013	Patented	9351193	No	is a Continuation in-part of	12/380,780
14/340,270	07/24/2014	Patented	9491199	No	is a Continuation in-part of	12/380,780
13/237,827	09/20/2011	Patented	8832777	No	is a Continuation in-part of	12/380,780
14/082,040	11/15/2013	Patented	9609544	No	is a Continuation in-part of	12/380,780
14/256,593	04/18/2014	Patented	8948025	No	is a Continuation in-part of	12/380,780
14/098,523	12/05/2013	Patented	9351193	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
14/098,527	12/05/2013	Patented	9270559	No	is a Continuation in-part of	12/380,780
14/673,625	03/30/2015	Patented	9179359	No	is a Continuation in-part of	12/380,780
14/687,698	04/15/2015	Patented	9198075	No	is a Continuation in-part of	12/380,780
14/688,725	04/16/2015	Patented	9198076	No	is a Continuation in-part of	12/380,780
14/689,512	04/17/2015	Patented	9521578	No	is a Continuation in-part of	12/380,780
15/624,697	06/15/2017	Abandoned	-	-	is a Continuation in-part of	12/380,780
16/654,295	10/16/2019	Patented	11218854	No	is a Continuation in-part of	12/380,780
17/867,597	07/18/2022	Patented	12166596	No	is a Continuation in-part of	12/380,780
17/869,667	07/20/2022	Patented	12401984	No	is a Continuation in-part of	12/380,780
18/088,450	12/23/2022	Patented	11985155	No	is a Continuation in-part of	12/380,780
18/747,091	06/18/2024	Patented	12149370	No	is a Continuation in-part of	12/380,780
14/098,523	12/05/2013	Patented	9351193	No	is a Continuation in-part of	12/380,780
14/102,436	12/10/2013	Patented	9253663	No	is a Continuation in-part of	12/380,780
13/248,028	09/28/2011	Patented	8924469	No	is a Continuation in-part of	12/380,780
13/309,463	12/01/2011	Patented	8793758	No	is a Continuation in-part of	12/380,780
13/441,821	04/06/2012	Patented	9755842	No	is a Continuation in-part of	12/380,780
13/748,152	01/23/2013	Patented	9557889	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
14/083,324	11/18/2013	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/102,436	12/10/2013	Patented	9253663	No	is a Continuation in-part of	12/380,780
14/275,805	05/12/2014	Patented	9578182	No	is a Continuation in-part of	12/380,780
17/121,717	12/14/2020	Patented	11477246	No	is a Continuation in-part of	12/380,780
13/247,998	09/28/2011	Patented	8725123	No	is a Continuation in-part of	12/380,780
14/147,394	01/03/2014	Patented	9026079	No	is a Continuation in-part of	12/380,780
14/670,315	03/26/2015	Patented	9215159	No	is a Continuation in-part of	12/380,780
15/369,542	12/05/2016	Patented	10237757	No	is a Continuation in-part of	12/380,780
17/867,607	07/18/2022	Patented	11832117	No	is a Continuation in-part of	12/380,780
18/384,772	10/27/2023	Patented	12184702	No	is a Continuation in-part of	12/380,780
13/247,998	09/28/2011	Patented	8725123	No	is a Continuation in-part of	12/380,780
13/802,483	03/13/2013	Abandoned	-	No	is a Continuation in-part of	12/380,780
13/941,310	07/12/2013	Patented	8745220	No	is a Continuation in-part of	12/380,780
14/338,807	07/23/2014	Patented	9094311	No	is a Continuation in-part of	12/380,780
14/339,110	07/23/2014	Patented	9705771	No	is a Continuation in-part of	12/380,780
14/948,082	11/20/2015	Patented	10165447	No	is a Continuation in-part of	12/380,780
13/237,827	09/20/2011	Patented	8832777	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
13/247,998	09/28/2011	Patented	8725123	No	is a Continuation in-part of	12/380,780
13/248,025	09/28/2011	Patented	8924543	No	is a Continuation in-part of	12/380,780
13/309,463	12/01/2011	Patented	8793758	No	is a Continuation in-part of	12/380,780
13/309,556	12/01/2011	Patented	8893009	No	is a Continuation in-part of	12/380,780
14/948,082	11/20/2015	Patented	10165447	No	is a Continuation in-part of	12/380,780
17/121,717	12/14/2020	Patented	11477246	No	is a Continuation in-part of	12/380,780
18/384,772	10/27/2023	Patented	12184702	No	is a Continuation in-part of	12/380,780
19/088,165	03/24/2025	Pending	-	No	is a Continuation in-part of	12/380,780
13/441,821	04/06/2012	Patented	9755842	No	is a Continuation in-part of	12/380,780
14/098,527	12/05/2013	Patented	9270559	No	is a Continuation in-part of	12/380,780
14/214,492	03/14/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
17/567,594	01/03/2022	Patented	12200786	No	is a Continuation in-part of	12/380,780
14/098,523	12/05/2013	Patented	9351193	No	is a Continuation in-part of	12/380,780
14/338,807	07/23/2014	Patented	9094311	No	is a Continuation in-part of	12/380,780
16/927,424	07/13/2020	Patented	11563592	No	is a Continuation in-part of	12/380,780
18/088,479	12/23/2022	Patented	12445319	No	is a Continuation in-part of	12/380,780
13/748,152	01/23/2013	Patented	9557889	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
14/083,324	11/18/2013	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/214,492	03/14/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
15/479,719	04/05/2017	Patented	10248996	No	is a Continuation in-part of	12/380,780
18/073,367	12/01/2022	Pending	-	No	is a Continuation in-part of	12/380,780
18/534,397	12/08/2023	Pending	-	No	is a Continuation in-part of	12/380,780
19/039,717	01/28/2025	Pending	-	No	is a Continuation in-part of	12/380,780
13/712,184	12/12/2012	Patented	8639935	No	is a Continuation of	12/380,780
14/668,829	03/25/2015	Patented	9173104	No	is a Continuation of	12/380,780
16/421,121	05/23/2019	Patented	11096055	No	is a Continuation of	12/380,780
16/436,628	06/10/2019	Patented	11228617	No	is a Continuation of	12/380,780
18/946,594	11/13/2024	Pending	-	No	is a Continuation of	12/380,780
13/134,005	05/25/2011	Patented	8635335	No	is a Continuation in-part of	12/380,780
13/802,483	03/13/2013	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/098,527	12/05/2013	Patented	9270559	No	is a Continuation in-part of	12/380,780
14/156,428	01/15/2014	Patented	9532261	No	is a Continuation in-part of	12/380,780
16/034,362	07/13/2018	Patented	10694385	No	is a Continuation in-part of	12/380,780
16/214,902	12/10/2018	Patented	10869199	No	is a Continuation in-part of	12/380,780

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17/099,157	11/16/2020	Patented	11665592	No	is a Continuation in-part of	12/380,780
18/604,106	03/13/2024	Patented	12488090	No	is a Continuation in-part of	12/380,780
12/694,451	01/27/2010	Patented	8548428	No	is a Continuation in-part of	12/380,780
13/237,827	09/20/2011	Patented	8832777	No	is a Continuation in-part of	12/380,780
14/082,040	11/15/2013	Patented	9609544	No	is a Continuation in-part of	12/380,780
14/098,523	12/05/2013	Patented	9351193	No	is a Continuation in-part of	12/380,780
13/229,580	09/09/2011	Patented	8626115	No	is a Continuation in-part of	12/380,780
13/248,025	09/28/2011	Patented	8924543	No	is a Continuation in-part of	12/380,780
14/147,394	01/03/2014	Patented	9026079	No	is a Continuation in-part of	12/380,780
14/338,807	07/23/2014	Patented	9094311	No	is a Continuation in-part of	12/380,780
13/248,028	09/28/2011	Patented	8924469	No	is a Continuation in-part of	12/380,780
14/275,805	05/12/2014	Patented	9578182	No	is a Continuation in-part of	12/380,780
18/384,772	10/27/2023	Patented	12184702	No	is a Continuation in-part of	12/380,780
13/134,005	05/25/2011	Patented	8635335	No	is a Continuation in-part of	12/380,780
14/685,511	04/13/2015	Patented	9215613	No	is a Continuation in-part of	12/380,780
15/220,184	07/26/2016	Patented	9674731	No	is a Continuation in-part of	12/380,780
15/416,377	01/26/2017	Patented	9954975	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
15/958,378	04/20/2018	Patented	10681179	No	is a Continuation in-part of	12/380,780
16/214,902	12/10/2018	Patented	10869199	No	is a Continuation in-part of	12/380,780
16/272,114	02/11/2019	Patented	10749700	No	is a Continuation in-part of	12/380,780
17/234,220	04/19/2021	Patented	12309024	No	is a Continuation in-part of	12/380,780
17/567,581	01/03/2022	Patented	12143909	No	is a Continuation in-part of	12/380,780
18/088,458	12/23/2022	Patented	12452377	No	is a Continuation in-part of	12/380,780
90/019,644	08/30/2024	Reexamination certificate issued	-	No	is a Continuation in-part of	12/380,780
19/305,229	08/20/2025	Pending	-	No	is a Continuation in-part of	12/380,780
13/237,827	09/20/2011	Patented	8832777	No	is a Continuation in-part of	12/380,780
13/247,998	09/28/2011	Patented	8725123	No	is a Continuation in-part of	12/380,780
14/147,394	01/03/2014	Patented	9026079	No	is a Continuation in-part of	12/380,780
16/214,902	12/10/2018	Patented	10869199	No	is a Continuation in-part of	12/380,780
13/134,028	05/25/2011	Patented	8589541	No	is a Continuation in-part of	12/380,780
14/083,324	11/18/2013	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/098,523	12/05/2013	Patented	9351193	No	is a Continuation in-part of	12/380,780
14/673,625	03/30/2015	Patented	9179359	No	is a Continuation in-part of	12/380,780
14/689,504	04/17/2015	Patented	9258735	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
14/689,512	04/17/2015	Patented	9521578	No	is a Continuation in-part of	12/380,780
14/948,082	11/20/2015	Patented	10165447	No	is a Continuation in-part of	12/380,780
15/220,184	07/26/2016	Patented	9674731	No	is a Continuation in-part of	12/380,780
15/958,430	04/20/2018	Patented	10462627	No	is a Continuation in-part of	12/380,780
16/216,479	12/11/2018	Patented	10798254	No	is a Continuation in-part of	12/380,780
13/239,321	09/21/2011	Patented	8898293	No	is a Continuation in-part of	12/380,780
13/947,099	07/21/2013	Patented	10057775	No	is a Continuation in-part of	12/380,780
16/214,902	12/10/2018	Patented	10869199	No	is a Continuation in-part of	12/380,780
13/941,310	07/12/2013	Patented	8745220	No	is a Continuation in-part of	12/380,780
14/948,082	11/20/2015	Patented	10165447	No	is a Continuation in-part of	12/380,780
13/309,463	12/01/2011	Patented	8793758	No	is a Continuation in-part of	12/380,780
16/694,813	11/25/2019	Patented	11363496	No	is a Continuation in-part of	12/380,780
13/842,172	03/15/2013	Patented	9858559	No	is a Continuation in-part of	12/380,780
13/248,028	09/28/2011	Patented	8924469	No	is a Continuation in-part of	12/380,780
13/253,013	10/04/2011	Patented	8745191	No	is a Continuation in-part of	12/380,780
14/214,492	03/14/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/339,110	07/23/2014	Patented	9705771	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
14/578,124	12/19/2014	Patented	9565707	No	is a Continuation in-part of	12/380,780
17/121,717	12/14/2020	Patented	11477246	No	is a Continuation in-part of	12/380,780
18/384,772	10/27/2023	Patented	12184702	No	is a Continuation in-part of	12/380,780
13/309,463	12/01/2011	Patented	8793758	No	is a Continuation in-part of	12/380,780
13/309,556	12/01/2011	Patented	8893009	No	is a Continuation in-part of	12/380,780
14/340,270	07/24/2014	Patented	9491199	No	is a Continuation in-part of	12/380,780
13/374,959	01/24/2012	Patented	8606911	No	is a Continuation in-part of	12/380,780
14/275,805	05/12/2014	Patented	9578182	No	is a Continuation in-part of	12/380,780
14/339,110	07/23/2014	Patented	9705771	No	is a Continuation in-part of	12/380,780
13/441,821	04/06/2012	Patented	9755842	No	is a Continuation in-part of	12/380,780
13/802,483	03/13/2013	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/275,805	05/12/2014	Patented	9578182	No	is a Continuation in-part of	12/380,780
15/681,730	08/21/2017	Patented	10715342	No	is a Continuation in-part of	12/380,780
14/275,805	05/12/2014	Patented	9578182	No	is a Continuation in-part of	12/380,780
16/353,176	03/14/2019	Patented	10783581	No	is a Continuation in-part of	12/380,780
17/026,549	09/21/2020	Patented	11538106	No	is a Continuation in-part of	12/380,780
17/344,009	06/10/2021	Abandoned	-	-	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
PCT/US10/22438	01/28/2010	Published	-	-	is a Continuation of	12/380,780
13/461,141	05/01/2012	Patented	8406733	No	is a Continuation of	12/380,780
14/151,769	01/09/2014	Patented	8886162	No	is a Continuation of	12/380,780
13/678,417	11/15/2012	Patented	8631102	No	is a Continuation of	12/380,780
15/427,837	02/08/2017	Patented	10321318	No	is a Continuation of	12/380,780
14/102,436	12/10/2013	Patented	9253663	No	is a Continuation in-part of	12/380,780
14/292,282	05/30/2014	Patented	9386165	No	is a Continuation in-part of	12/380,780
17/869,696	07/20/2022	Patented	11973804	No	is a Continuation in-part of	12/380,780
18/885,194	09/13/2024	Pending	-	No	is a Continuation in-part of	12/380,780
18/903,993	10/01/2024	Pending	-	No	is a Continuation in-part of	12/380,780
19/305,071	08/20/2025	Pending	-	No	is a Continuation in-part of	12/380,780
13/309,463	12/01/2011	Patented	8793758	No	is a Continuation in-part of	12/380,780
13/656,620	10/19/2012	Patented	8630617	No	is a Continuation in-part of	12/380,780
13/941,310	07/12/2013	Patented	8745220	No	is a Continuation in-part of	12/380,780
14/037,321	09/25/2013	Patented	9565543	No	is a Continuation in-part of	12/380,780
14/098,527	12/05/2013	Patented	9270559	No	is a Continuation in-part of	12/380,780
14/181,910	02/17/2014	Patented	9571559	No	is a Continuation in-part of	12/380,780

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14/948,082	11/20/2015	Patented	10165447	No	is a Continuation in-part of	12/380,780
16/214,902	12/10/2018	Patented	10869199	No	is a Continuation in-part of	12/380,780
13/134,028	05/25/2011	Patented	8589541	No	is a Continuation in-part of	12/380,780
14/098,527	12/05/2013	Patented	9270559	No	is a Continuation in-part of	12/380,780
18/384,772	10/27/2023	Patented	12184702	No	is a Continuation in-part of	12/380,780
12/695,020	01/27/2010	Patented	8406748	No	is a Continuation in-part of	12/380,780
14/083,324	11/18/2013	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/181,910	02/17/2014	Patented	9571559	No	is a Continuation in-part of	12/380,780
17/121,717	12/14/2020	Patented	11477246	No	is a Continuation in-part of	12/380,780
13/309,463	12/01/2011	Patented	8793758	No	is a Continuation in-part of	12/380,780
14/082,040	11/15/2013	Patented	9609544	No	is a Continuation in-part of	12/380,780
14/687,715	04/15/2015	Patented	9749899	No	is a Continuation in-part of	12/380,780
14/688,713	04/16/2015	Patented	9271184	No	is a Continuation in-part of	12/380,780
15/446,291	03/01/2017	Patented	10171681	No	is a Continuation in-part of	12/380,780
16/426,786	05/30/2019	Patented	11190427	No	is a Continuation in-part of	12/380,780
18/384,772	10/27/2023	Patented	12184702	No	is a Continuation in-part of	12/380,780
18/747,944	06/19/2024	Pending	-	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
90/019,643	08/30/2024	Reexamination certificate issued	-	No	is a Continuation in-part of	12/380,780
18/948,022	11/14/2024	Pending	-	Yes	is a Continuation in-part of	12/380,780
19/283,054	07/28/2025	Pending	-	Yes	is a Continuation in-part of	12/380,780
13/441,821	04/06/2012	Patented	9755842	No	is a Continuation in-part of	12/380,780
14/181,910	02/17/2014	Patented	9571559	No	is a Continuation in-part of	12/380,780
13/134,005	05/25/2011	Patented	8635335	No	is a Continuation in-part of	12/380,780
13/229,580	09/09/2011	Patented	8626115	No	is a Continuation in-part of	12/380,780
13/309,556	12/01/2011	Patented	8893009	No	is a Continuation in-part of	12/380,780
14/082,040	11/15/2013	Patented	9609544	No	is a Continuation in-part of	12/380,780
14/339,110	07/23/2014	Patented	9705771	No	is a Continuation in-part of	12/380,780
16/426,786	05/30/2019	Patented	11190427	No	is a Continuation in-part of	12/380,780
18/379,606	10/12/2023	Patented	12289621	No	is a Continuation in-part of	12/380,780
13/253,013	10/04/2011	Patented	8745191	No	is a Continuation in-part of	12/380,780
13/309,556	12/01/2011	Patented	8893009	No	is a Continuation in-part of	12/380,780
13/748,152	01/23/2013	Patented	9557889	No	is a Continuation in-part of	12/380,780
14/083,324	11/18/2013	Abandoned	-	No	is a Continuation in-part of	12/380,780
15/699,746	09/08/2017	Patented	10326800	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
13/802,483	03/13/2013	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/083,324	11/18/2013	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/098,527	12/05/2013	Patented	9270559	No	is a Continuation in-part of	12/380,780
14/473,137	08/29/2014	Patented	9591474	No	is a Continuation in-part of	12/380,780
16/213,612	12/07/2018	Patented	10798558	No	is a Continuation in-part of	12/380,780
17/869,696	07/20/2022	Patented	11973804	No	is a Continuation in-part of	12/380,780
13/253,013	10/04/2011	Patented	8745191	No	is a Continuation in-part of	12/380,780
14/275,805	05/12/2014	Patented	9578182	No	is a Continuation in-part of	12/380,780
13/842,172	03/15/2013	Patented	9858559	No	is a Continuation in-part of	12/380,780
13/941,310	07/12/2013	Patented	8745220	No	is a Continuation in-part of	12/380,780
14/083,324	11/18/2013	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/098,523	12/05/2013	Patented	9351193	No	is a Continuation in-part of	12/380,780
16/214,902	12/10/2018	Patented	10869199	No	is a Continuation in-part of	12/380,780
17/099,157	11/16/2020	Patented	11665592	No	is a Continuation in-part of	12/380,780
13/248,025	09/28/2011	Patented	8924543	No	is a Continuation in-part of	12/380,780
13/248,028	09/28/2011	Patented	8924469	No	is a Continuation in-part of	12/380,780
13/374,959	01/24/2012	Patented	8606911	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
15/177,962	06/09/2016	Abandoned	-	-	is a Continuation in-part of	12/380,780
17/869,696	07/20/2022	Patented	11973804	No	is a Continuation in-part of	12/380,780
15/287,603	10/06/2016	Patented	10080250	No	is a Continuation in-part of	12/380,780
13/253,013	10/04/2011	Patented	8745191	No	is a Continuation in-part of	12/380,780
14/948,082	11/20/2015	Patented	10165447	No	is a Continuation in-part of	12/380,780
18/384,772	10/27/2023	Patented	12184702	No	is a Continuation in-part of	12/380,780
13/374,959	01/24/2012	Patented	8606911	No	is a Continuation in-part of	12/380,780
14/098,527	12/05/2013	Patented	9270559	No	is a Continuation in-part of	12/380,780
14/214,492	03/14/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
18/534,415	12/08/2023	Pending	-	No	is a Continuation in-part of	12/380,780
PCT/US10/22273	01/27/2010	Published	-	-	is a Continuation of	12/380,780
13/705,055	12/04/2012	Patented	8667571	No	is a Continuation of	12/380,780
13/867,347	04/22/2013	Patented	8737957	No	is a Continuation of	12/380,780
13/870,939	04/25/2013	Patented	8570908	No	is a Continuation of	12/380,780
13/896,065	05/16/2013	Patented	8797908	No	is a Continuation of	12/380,780
14/665,235	03/23/2015	Patented	9179316	No	is a Continuation of	12/380,780
14/667,516	03/24/2015	Patented	9198117	No	is a Continuation of	12/380,780

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14/959,808	12/04/2015	Abandoned	-	-	is a Continuation of	12/380,780
15/217,538	07/22/2016	Patented	9491564	No	is a Continuation of	12/380,780
17/401,635	08/13/2021	Patented	11757943	No	is a Continuation of	12/380,780
13/134,028	05/25/2011	Patented	8589541	No	is a Continuation in-part of	12/380,780
13/134,028	05/25/2011	Patented	8589541	No	is a Continuation in-part of	12/380,780
13/253,013	10/04/2011	Patented	8745191	No	is a Continuation in-part of	12/380,780
13/309,556	12/01/2011	Patented	8893009	No	is a Continuation in-part of	12/380,780
14/082,040	11/15/2013	Patented	9609544	No	is a Continuation in-part of	12/380,780
14/473,137	08/29/2014	Patented	9591474	No	is a Continuation in-part of	12/380,780
90/019,892	03/31/2025	Pending	-	No	is a Continuation in-part of	12/380,780
13/248,025	09/28/2011	Patented	8924543	No	is a Continuation in-part of	12/380,780
17/869,696	07/20/2022	Patented	11973804	No	is a Continuation in-part of	12/380,780
13/674,808	11/12/2012	Patented	8634821	No	is a Continuation in-part of	12/380,780
19/283,028	07/28/2025	Pending	-	No	is a Continuation in-part of	12/380,780
13/134,005	05/25/2011	Patented	8635335	No	is a Continuation in-part of	12/380,780
13/309,556	12/01/2011	Patented	8893009	No	is a Continuation in-part of	12/380,780
13/588,965	08/17/2012	Patented	8868455	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
15/400,768	01/06/2017	Patented	10237146	No	is a Continuation in-part of	12/380,780
16/214,902	12/10/2018	Patented	10869199	No	is a Continuation in-part of	12/380,780
17/106,648	11/30/2020	Patented	11750477	No	is a Continuation in-part of	12/380,780
18/221,339	07/12/2023	Patented	12095632	No	is a Continuation in-part of	12/380,780
19/424,975	12/18/2025	Pending	-	No	is a Continuation in-part of	12/380,780
13/237,827	09/20/2011	Patented	8832777	No	is a Continuation in-part of	12/380,780
14/147,394	01/03/2014	Patented	9026079	No	is a Continuation in-part of	12/380,780
14/541,493	11/14/2014	Patented	9392462	No	is a Continuation in-part of	12/380,780
14/541,628	11/14/2014	Patented	9706061	No	is a Continuation in-part of	12/380,780
14/676,704	04/01/2015	Patented	9143976	No	is a Continuation in-part of	12/380,780
15/287,597	10/06/2016	Patented	10064055	No	is a Continuation in-part of	12/380,780
15/586,118	05/03/2017	Patented	10326675	No	is a Continuation in-part of	12/380,780
15/977,713	05/11/2018	Patented	10484858	No	is a Continuation in-part of	12/380,780
16/895,427	06/08/2020	Patented	11516301	No	is a Continuation in-part of	12/380,780
17/019,957	09/14/2020	Patented	11533642	No	is a Continuation in-part of	12/380,780
17/101,442	11/23/2020	Patented	11923995	No	is a Continuation in-part of	12/380,780
17/971,941	10/24/2022	Pending	-	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
90/019,610	08/05/2024	Reexamination certificate issued	-	Yes	is a Continuation in-part of	12/380,780
14/952,374	11/25/2015	Patented	9986413	No	is a Continuation in-part of	12/380,780
13/248,025	09/28/2011	Patented	8924543	No	is a Continuation in-part of	12/380,780
13/309,556	12/01/2011	Patented	8893009	No	is a Continuation in-part of	12/380,780
14/339,110	07/23/2014	Patented	9705771	No	is a Continuation in-part of	12/380,780
16/214,902	12/10/2018	Patented	10869199	No	is a Continuation in-part of	12/380,780
13/239,321	09/21/2011	Patented	8898293	No	is a Continuation in-part of	12/380,780
13/248,028	09/28/2011	Patented	8924469	No	is a Continuation in-part of	12/380,780
13/309,463	12/01/2011	Patented	8793758	No	is a Continuation in-part of	12/380,780
14/156,428	01/15/2014	Patented	9532261	No	is a Continuation in-part of	12/380,780
14/541,493	11/14/2014	Patented	9392462	No	is a Continuation in-part of	12/380,780
15/158,522	05/18/2016	Patented	9980146	No	is a Continuation in-part of	12/380,780
16/595,583	10/08/2019	Pending	-	No	is a Continuation in-part of	12/380,780
17/121,717	12/14/2020	Patented	11477246	No	is a Continuation in-part of	12/380,780
19/299,098	08/13/2025	Pending	-	No	is a Continuation in-part of	12/380,780
13/229,580	09/09/2011	Patented	8626115	No	is a Continuation in-part of	12/380,780
13/248,028	09/28/2011	Patented	8924469	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
13/309,463	12/01/2011	Patented	8793758	No	is a Continuation in-part of	12/380,780
18/384,772	10/27/2023	Patented	12184702	No	is a Continuation in-part of	12/380,780
13/248,028	09/28/2011	Patented	8924469	No	is a Continuation in-part of	12/380,780
13/842,172	03/15/2013	Patented	9858559	No	is a Continuation in-part of	12/380,780
15/416,351	01/26/2017	Patented	10171990	No	is a Continuation in-part of	12/380,780
17/093,535	11/09/2020	Patented	11589216	No	is a Continuation in-part of	12/380,780
14/948,082	11/20/2015	Patented	10165447	No	is a Continuation in-part of	12/380,780
13/247,998	09/28/2011	Patented	8725123	No	is a Continuation in-part of	12/380,780
16/214,902	12/10/2018	Patented	10869199	No	is a Continuation in-part of	12/380,780
14/338,807	07/23/2014	Patented	9094311	No	is a Continuation in-part of	12/380,780
13/842,172	03/15/2013	Patented	9858559	No	is a Continuation in-part of	12/380,780
14/292,282	05/30/2014	Patented	9386165	No	is a Continuation in-part of	12/380,780
15/162,469	05/23/2016	Patented	10200541	No	is a Continuation in-part of	12/380,780
16/213,800	12/07/2018	Patented	10798252	No	is a Continuation in-part of	12/380,780
17/121,717	12/14/2020	Patented	11477246	No	is a Continuation in-part of	12/380,780
14/275,805	05/12/2014	Patented	9578182	No	is a Continuation in-part of	12/380,780
14/181,910	02/17/2014	Patented	9571559	No	is a Continuation in-part of	12/380,780

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PCT/US10/21302	01/18/2010	Published	-	-	is a Continuation of	12/380,780
PCT/US10/22269	01/27/2010	Published	-	-	is a Continuation of	12/380,780
13/456,139	04/25/2012	Patented	8478667	No	is a Continuation of	12/380,780
13/742,317	01/15/2013	Patented	8640198	No	is a Continuation of	12/380,780
14/667,353	03/24/2015	Patented	9232403	No	is a Continuation of	12/380,780
12/694,445	01/27/2010	Patented	8391834	No	is a Continuation in-part of	12/380,780
13/248,025	09/28/2011	Patented	8924543	No	is a Continuation in-part of	12/380,780
13/374,959	01/24/2012	Patented	8606911	No	is a Continuation in-part of	12/380,780
14/083,324	11/18/2013	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/338,807	07/23/2014	Patented	9094311	No	is a Continuation in-part of	12/380,780
14/339,110	07/23/2014	Patented	9705771	No	is a Continuation in-part of	12/380,780
17/833,684	06/06/2022	Pending	-	No	is a Continuation in-part of	12/380,780
17/867,585	07/18/2022	Patented	11966464	No	is a Continuation in-part of	12/380,780
13/239,321	09/21/2011	Patented	8898293	No	is a Continuation in-part of	12/380,780
13/248,025	09/28/2011	Patented	8924543	No	is a Continuation in-part of	12/380,780
13/309,556	12/01/2011	Patented	8893009	No	is a Continuation in-part of	12/380,780
13/309,463	12/01/2011	Patented	8793758	No	is a Continuation in-part of	12/380,780

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14/156,428	01/15/2014	Patented	9532261	No	is a Continuation in-part of	12/380,780
15/210,619	07/14/2016	Patented	10070305	No	is a Continuation in-part of	12/380,780
16/214,902	12/10/2018	Patented	10869199	No	is a Continuation in-part of	12/380,780
14/098,523	12/05/2013	Patented	9351193	No	is a Continuation in-part of	12/380,780
17/975,560	10/27/2022	Abandoned	-	No	is a Continuation in-part of	12/380,780
12/695,021	01/27/2010	Patented	8346225	No	is a Continuation in-part of	12/380,780
13/947,099	07/21/2013	Patented	10057775	No	is a Continuation in-part of	12/380,780
14/677,788	04/02/2015	Patented	9154428	No	is a Continuation in-part of	12/380,780
14/684,033	04/10/2015	Patented	9277445	No	is a Continuation in-part of	12/380,780
14/685,506	04/13/2015	Patented	9319913	No	is a Continuation in-part of	12/380,780
14/687,707	04/15/2015	Patented	9749898	No	is a Continuation in-part of	12/380,780
14/689,504	04/17/2015	Patented	9258735	No	is a Continuation in-part of	12/380,780
14/952,374	11/25/2015	Patented	9986413	No	is a Continuation in-part of	12/380,780
15/977,731	05/11/2018	Patented	10771980	No	is a Continuation in-part of	12/380,780
16/216,479	12/11/2018	Patented	10798254	No	is a Continuation in-part of	12/380,780
17/008,031	08/31/2020	Patented	11665186	No	is a Continuation in-part of	12/380,780
17/344,009	06/10/2021	Abandoned	-	-	is a Continuation in-part of	12/380,780

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17/536,397	11/29/2021	Patented	12432130	No	is a Continuation in-part of	12/380,780
19/299,098	08/13/2025	Pending	-	No	is a Continuation in-part of	12/380,780
19/366,368	10/22/2025	Pending	-	No	is a Continuation in-part of	12/380,780
12/695,980	01/28/2010	Patented	8340634	No	is a Continuation in-part of	12/380,780
14/156,428	01/15/2014	Patented	9532261	No	is a Continuation in-part of	12/380,780
14/272,274	05/07/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
18/384,772	10/27/2023	Patented	12184702	No	is a Continuation in-part of	12/380,780
13/229,580	09/09/2011	Patented	8626115	No	is a Continuation in-part of	12/380,780
13/237,827	09/20/2011	Patented	8832777	No	is a Continuation in-part of	12/380,780
13/247,998	09/28/2011	Patented	8725123	No	is a Continuation in-part of	12/380,780
13/842,172	03/15/2013	Patented	9858559	No	is a Continuation in-part of	12/380,780
14/147,394	01/03/2014	Patented	9026079	No	is a Continuation in-part of	12/380,780
14/272,274	05/07/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/292,282	05/30/2014	Patented	9386165	No	is a Continuation in-part of	12/380,780
14/473,137	08/29/2014	Patented	9591474	No	is a Continuation in-part of	12/380,780
16/272,098	02/11/2019	Patented	10791471	No	is a Continuation in-part of	12/380,780
17/869,696	07/20/2022	Patented	11973804	No	is a Continuation in-part of	12/380,780

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13/842,172	03/15/2013	Patented	9858559	No	is a Continuation in-part of	12/380,780
14/098,527	12/05/2013	Patented	9270559	No	is a Continuation in-part of	12/380,780
14/147,394	01/03/2014	Patented	9026079	No	is a Continuation in-part of	12/380,780
14/272,274	05/07/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/340,270	07/24/2014	Patented	9491199	No	is a Continuation in-part of	12/380,780
14/473,137	08/29/2014	Patented	9591474	No	is a Continuation in-part of	12/380,780
17/869,696	07/20/2022	Patented	11973804	No	is a Continuation in-part of	12/380,780
13/239,321	09/21/2011	Patented	8898293	No	is a Continuation in-part of	12/380,780
13/253,013	10/04/2011	Patented	8745191	No	is a Continuation in-part of	12/380,780
13/748,152	01/23/2013	Patented	9557889	No	is a Continuation in-part of	12/380,780
14/339,110	07/23/2014	Patented	9705771	No	is a Continuation in-part of	12/380,780
15/158,526	05/18/2016	Patented	10492102	No	is a Continuation in-part of	12/380,780
16/236,134	12/28/2018	Patented	10834577	No	is a Continuation in-part of	12/380,780
17/063,047	10/05/2020	Patented	11582593	No	is a Continuation in-part of	12/380,780
18/088,416	12/23/2022	Patented	12543031	No	is a Continuation in-part of	12/380,780
13/239,321	09/21/2011	Patented	8898293	No	is a Continuation in-part of	12/380,780
14/098,523	12/05/2013	Patented	9351193	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
14/292,282	05/30/2014	Patented	9386165	No	is a Continuation in-part of	12/380,780
14/338,807	07/23/2014	Patented	9094311	No	is a Continuation in-part of	12/380,780
14/340,270	07/24/2014	Patented	9491199	No	is a Continuation in-part of	12/380,780
17/121,717	12/14/2020	Patented	11477246	No	is a Continuation in-part of	12/380,780
13/947,099	07/21/2013	Patented	10057775	No	is a Continuation in-part of	12/380,780
13/247,998	09/28/2011	Patented	8725123	No	is a Continuation in-part of	12/380,780
14/098,527	12/05/2013	Patented	9270559	No	is a Continuation in-part of	12/380,780
13/309,556	12/01/2011	Patented	8893009	No	is a Continuation in-part of	12/380,780
14/098,523	12/05/2013	Patented	9351193	No	is a Continuation in-part of	12/380,780
14/181,910	02/17/2014	Patented	9571559	No	is a Continuation in-part of	12/380,780
13/737,748	01/09/2013	Patented	9198042	No	is a Continuation of	12/380,780
PCT/US10/22240	01/27/2010	Published	-	-	is a Continuation of	12/380,780
13/457,385	04/26/2012	Patented	8385916	No	is a Continuation of	12/380,780
13/866,955	04/19/2013	Abandoned	-	No	is a Continuation of	12/380,780
13/866,963	04/19/2013	Patented	8695073	No	is a Continuation of	12/380,780
14/263,604	04/28/2014	Patented	9037127	No	is a Continuation of	12/380,780
14/663,248	03/19/2015	Patented	9179315	No	is a Continuation of	12/380,780

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14/678,632	04/03/2015	Patented	9204374	No	is a Continuation of	12/380,780
15/239,398	08/17/2016	Patented	9641957	No	is a Continuation of	12/380,780
17/342,136	06/08/2021	Patented	11757942	No	is a Continuation of	12/380,780
17/577,237	01/17/2022	Patented	12184700	No	is a Continuation of	12/380,780
13/237,827	09/20/2011	Patented	8832777	No	is a Continuation in-part of	12/380,780
13/247,998	09/28/2011	Patented	8725123	No	is a Continuation in-part of	12/380,780
14/147,394	01/03/2014	Patented	9026079	No	is a Continuation in-part of	12/380,780
16/907,887	06/22/2020	Patented	11405429	No	is a Continuation in-part of	12/380,780
18/384,772	10/27/2023	Patented	12184702	No	is a Continuation in-part of	12/380,780
14/272,274	05/07/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
18/384,772	10/27/2023	Patented	12184702	No	is a Continuation in-part of	12/380,780
17/742,190	05/11/2022	Patented	12389217	No	is a Continuation in-part of	12/380,780
17/833,684	06/06/2022	Pending	-	No	is a Continuation in-part of	12/380,780
13/309,463	12/01/2011	Patented	8793758	No	is a Continuation in-part of	12/380,780
13/947,099	07/21/2013	Patented	10057775	No	is a Continuation in-part of	12/380,780
14/098,527	12/05/2013	Patented	9270559	No	is a Continuation in-part of	12/380,780
14/147,394	01/03/2014	Patented	9026079	No	is a Continuation in-part of	12/380,780

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14/156,428	01/15/2014	Patented	9532261	No	is a Continuation in-part of	12/380,780
14/272,274	05/07/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/292,282	05/30/2014	Patented	9386165	No	is a Continuation in-part of	12/380,780
14/680,943	04/07/2015	Patented	9386121	No	is a Continuation in-part of	12/380,780
18/779,605	07/22/2024	Patented	12524788	No	is a Continuation in-part of	12/380,780
18/969,784	12/05/2024	Pending	-	No	is a Continuation in-part of	12/380,780
13/718,917	12/18/2012	Patented	9247450	No	is a Continuation in-part of	12/380,780
14/670,315	03/26/2015	Patented	9215159	No	is a Continuation in-part of	12/380,780
14/684,051	04/10/2015	Patented	9198074	No	is a Continuation in-part of	12/380,780
14/948,082	11/20/2015	Patented	10165447	No	is a Continuation in-part of	12/380,780
15/160,520	05/20/2016	Patented	9973930	No	is a Continuation in-part of	12/380,780
15/227,814	08/03/2016	Patented	9647918	No	is a Continuation in-part of	12/380,780
15/958,430	04/20/2018	Patented	10462627	No	is a Continuation in-part of	12/380,780
15/977,766	05/11/2018	Patented	10237773	No	is a Continuation in-part of	12/380,780
16/274,405	02/13/2019	Patented	11039020	No	is a Continuation in-part of	12/380,780
17/063,336	10/05/2020	Patented	11570309	No	is a Continuation in-part of	12/380,780
19/089,864	03/25/2025	Pending	-	No	is a Continuation in-part of	12/380,780

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13/134,005	05/25/2011	Patented	8635335	No	is a Continuation in-part of	12/380,780
14/948,082	11/20/2015	Patented	10165447	No	is a Continuation in-part of	12/380,780
18/384,772	10/27/2023	Patented	12184702	No	is a Continuation in-part of	12/380,780
18/903,993	10/01/2024	Pending	-	No	is a Continuation in-part of	12/380,780
13/237,827	09/20/2011	Patented	8832777	No	is a Continuation in-part of	12/380,780
14/098,527	12/05/2013	Patented	9270559	No	is a Continuation in-part of	12/380,780
14/473,137	08/29/2014	Patented	9591474	No	is a Continuation in-part of	12/380,780
15/976,170	05/10/2018	Patented	10716006	No	is a Continuation in-part of	12/380,780
16/214,902	12/10/2018	Patented	10869199	No	is a Continuation in-part of	12/380,780
13/441,821	04/06/2012	Patented	9755842	No	is a Continuation in-part of	12/380,780
13/947,099	07/21/2013	Patented	10057775	No	is a Continuation in-part of	12/380,780
14/181,910	02/17/2014	Patented	9571559	No	is a Continuation in-part of	12/380,780
14/703,620	05/04/2015	Patented	9769207	No	is a Continuation in-part of	12/380,780
16/426,251	05/30/2019	Patented	11190545	No	is a Continuation in-part of	12/380,780
14/272,274	05/07/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/292,282	05/30/2014	Patented	9386165	No	is a Continuation in-part of	12/380,780
14/338,807	07/23/2014	Patented	9094311	No	is a Continuation in-part of	12/380,780

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18/102,629	01/27/2023	Patented	12389218	No	is a Continuation in-part of	12/380,780
19/437,874	12/31/2025	Pending	-	No	is a Continuation in-part of	12/380,780
18/384,772	10/27/2023	Patented	12184702	No	is a Continuation in-part of	12/380,780
13/441,821	04/06/2012	Patented	9755842	No	is a Continuation in-part of	12/380,780
15/158,526	05/18/2016	Patented	10492102	No	is a Continuation in-part of	12/380,780
17/833,684	06/06/2022	Pending	-	No	is a Continuation in-part of	12/380,780
18/384,772	10/27/2023	Patented	12184702	No	is a Continuation in-part of	12/380,780
13/374,959	01/24/2012	Patented	8606911	No	is a Continuation in-part of	12/380,780
13/248,025	09/28/2011	Patented	8924543	No	is a Continuation in-part of	12/380,780
14/272,274	05/07/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
17/869,696	07/20/2022	Patented	11973804	No	is a Continuation in-part of	12/380,780
14/214,492	03/14/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
16/274,405	02/13/2019	Patented	11039020	No	is a Continuation in-part of	12/380,780
13/678,410	11/15/2012	Patented	8630611	No	is a Continuation of	12/380,780
13/742,312	01/15/2013	Patented	8639811	No	is a Continuation of	12/380,780
15/582,350	04/28/2017	Patented	10321320	No	is a Continuation of	12/380,780
13/229,580	09/09/2011	Patented	8626115	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
13/253,013	10/04/2011	Patented	8745191	No	is a Continuation in-part of	12/380,780
13/842,172	03/15/2013	Patented	9858559	No	is a Continuation in-part of	12/380,780
14/098,523	12/05/2013	Patented	9351193	No	is a Continuation in-part of	12/380,780
16/218,721	12/13/2018	Patented	10841839	No	is a Continuation in-part of	12/380,780
17/869,696	07/20/2022	Patented	11973804	No	is a Continuation in-part of	12/380,780
14/102,436	12/10/2013	Patented	9253663	No	is a Continuation in-part of	12/380,780
14/339,110	07/23/2014	Patented	9705771	No	is a Continuation in-part of	12/380,780
13/441,821	04/06/2012	Patented	9755842	No	is a Continuation in-part of	12/380,780
14/082,040	11/15/2013	Patented	9609544	No	is a Continuation in-part of	12/380,780
14/102,436	12/10/2013	Patented	9253663	No	is a Continuation in-part of	12/380,780
14/158,206	01/17/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/272,274	05/07/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/948,082	11/20/2015	Patented	10165447	No	is a Continuation in-part of	12/380,780
16/804,983	02/28/2020	Patented	11337059	No	is a Continuation in-part of	12/380,780
13/441,821	04/06/2012	Patented	9755842	No	is a Continuation in-part of	12/380,780
13/593,164	08/23/2012	Patented	8527630	No	is a Continuation in-part of	12/380,780
14/612,073	02/02/2015	Patented	9544397	No	is a Continuation in-part of	12/380,780

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16/272,198	02/11/2019	Patented	10855559	No	is a Continuation in-part of	12/380,780
17/063,176	10/05/2020	Abandoned	-	No	is a Continuation in-part of	12/380,780
13/309,556	12/01/2011	Patented	8893009	No	is a Continuation in-part of	12/380,780
13/441,821	04/06/2012	Patented	9755842	No	is a Continuation in-part of	12/380,780
13/718,952	12/18/2012	Patented	9204282	No	is a Continuation in-part of	12/380,780
14/102,436	12/10/2013	Patented	9253663	No	is a Continuation in-part of	12/380,780
14/272,274	05/07/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/960,284	12/04/2015	Patented	9942796	No	is a Continuation in-part of	12/380,780
15/158,522	05/18/2016	Patented	9980146	No	is a Continuation in-part of	12/380,780
15/946,405	04/05/2018	Patented	10985977	No	is a Continuation in-part of	12/380,780
15/976,170	05/10/2018	Patented	10716006	No	is a Continuation in-part of	12/380,780
16/927,387	07/13/2020	Patented	12388810	Yes	is a Continuation in-part of	12/380,780
16/993,012	08/13/2020	Patented	11405224	No	is a Continuation in-part of	12/380,780
18/630,537	04/09/2024	Patented	12294602	No	is a Continuation in-part of	12/380,780
19/182,221	04/17/2025	Pending	-	No	is a Continuation in-part of	12/380,780
19/283,039	07/28/2025	Pending	-	No	is a Continuation in-part of	12/380,780
19/315,091	08/29/2025	Pending	-	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
13/718,936	12/18/2012	Patented	8630630	No	is a Continuation in-part of	12/380,780
13/947,099	07/21/2013	Patented	10057775	No	is a Continuation in-part of	12/380,780
14/082,040	11/15/2013	Patented	9609544	No	is a Continuation in-part of	12/380,780
13/134,028	05/25/2011	Patented	8589541	No	is a Continuation in-part of	12/380,780
13/239,321	09/21/2011	Patented	8898293	No	is a Continuation in-part of	12/380,780
13/941,310	07/12/2013	Patented	8745220	No	is a Continuation in-part of	12/380,780
13/947,099	07/21/2013	Patented	10057775	No	is a Continuation in-part of	12/380,780
14/082,040	11/15/2013	Patented	9609544	No	is a Continuation in-part of	12/380,780
14/338,807	07/23/2014	Patented	9094311	No	is a Continuation in-part of	12/380,780
13/441,821	04/06/2012	Patented	9755842	No	is a Continuation in-part of	12/380,780
14/676,704	04/01/2015	Patented	9143976	No	is a Continuation in-part of	12/380,780
15/428,891	02/09/2017	Patented	10264138	No	is a Continuation in-part of	12/380,780
15/446,291	03/01/2017	Patented	10171681	No	is a Continuation in-part of	12/380,780
17/035,403	09/28/2020	Patented	11425580	No	is a Continuation in-part of	12/380,780
14/275,805	05/12/2014	Patented	9578182	No	is a Continuation in-part of	12/380,780
14/551,809	11/24/2014	Patented	9572019	No	is a Continuation in-part of	12/380,780
17/833,684	06/06/2022	Pending	-	No	is a Continuation in-part of	12/380,780

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14/181,910	02/17/2014	Patented	9571559	No	is a Continuation in-part of	12/380,780
13/309,556	12/01/2011	Patented	8893009	No	is a Continuation in-part of	12/380,780
14/948,082	11/20/2015	Patented	10165447	No	is a Continuation in-part of	12/380,780
13/374,959	01/24/2012	Patented	8606911	No	is a Continuation in-part of	12/380,780
16/132,643	09/17/2018	Patented	10536983	No	is a Continuation in-part of	12/380,780
13/941,310	07/12/2013	Patented	8745220	No	is a Continuation in-part of	12/380,780
13/947,099	07/21/2013	Patented	10057775	No	is a Continuation in-part of	12/380,780
14/083,324	11/18/2013	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/181,910	02/17/2014	Patented	9571559	No	is a Continuation in-part of	12/380,780
13/748,152	01/23/2013	Patented	9557889	No	is a Continuation in-part of	12/380,780
19/331,282	09/17/2025	Pending	-	No	is a Continuation in-part of	12/380,780
14/275,805	05/12/2014	Patented	9578182	No	is a Continuation in-part of	12/380,780
15/428,891	02/09/2017	Patented	10264138	No	is a Continuation in-part of	12/380,780
13/457,389	04/26/2012	Patented	8396458	No	is a Continuation of	12/380,780
13/852,933	03/28/2013	Patented	8635678	No	is a Continuation of	12/380,780
14/979,233	12/22/2015	Patented	9532161	No	is a Continuation of	12/380,780
90/019,753	12/03/2024	Pending	-	No	is a Continuation of	12/380,780

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13/239,321	09/21/2011	Patented	8898293	No	is a Continuation in-part of	12/380,780
13/309,463	12/01/2011	Patented	8793758	No	is a Continuation in-part of	12/380,780
13/947,099	07/21/2013	Patented	10057775	No	is a Continuation in-part of	12/380,780
14/275,805	05/12/2014	Patented	9578182	No	is a Continuation in-part of	12/380,780
14/340,270	07/24/2014	Patented	9491199	No	is a Continuation in-part of	12/380,780
18/136,255	04/18/2023	Patented	12120551	No	is a Continuation in-part of	12/380,780
90/019,892	03/31/2025	Pending	-	No	is a Continuation in-part of	12/380,780
13/134,005	05/25/2011	Patented	8635335	No	is a Continuation in-part of	12/380,780
13/441,821	04/06/2012	Patented	9755842	No	is a Continuation in-part of	12/380,780
13/947,099	07/21/2013	Patented	10057775	No	is a Continuation in-part of	12/380,780
14/147,394	01/03/2014	Patented	9026079	No	is a Continuation in-part of	12/380,780
14/156,428	01/15/2014	Patented	9532261	No	is a Continuation in-part of	12/380,780
12/694,455	01/27/2010	Patented	8402111	No	is a Continuation in-part of	12/380,780
13/237,827	09/20/2011	Patented	8832777	No	is a Continuation in-part of	12/380,780
13/253,013	10/04/2011	Patented	8745191	No	is a Continuation in-part of	12/380,780
16/118,374	08/30/2018	Patented	10582375	No	is a Continuation in-part of	12/380,780
14/102,436	12/10/2013	Patented	9253663	No	is a Continuation in-part of	12/380,780

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14/682,915	04/09/2015	Patented	9225797	No	is a Continuation in-part of	12/380,780
15/280,922	09/29/2016	Patented	10057141	No	is a Continuation in-part of	12/380,780
16/694,813	11/25/2019	Patented	11363496	No	is a Continuation in-part of	12/380,780
13/718,936	12/18/2012	Patented	8630630	No	is a Continuation in-part of	12/380,780
14/083,324	11/18/2013	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/156,428	01/15/2014	Patented	9532261	No	is a Continuation in-part of	12/380,780
14/675,113	03/31/2015	Patented	9137701	No	is a Continuation in-part of	12/380,780
14/688,704	04/16/2015	Patented	9277433	No	is a Continuation in-part of	12/380,780
14/839,530	08/28/2015	Patented	9220027	No	is a Continuation in-part of	12/380,780
15/415,022	01/25/2017	Patented	9955332	No	is a Continuation in-part of	12/380,780
15/428,891	02/09/2017	Patented	10264138	No	is a Continuation in-part of	12/380,780
15/625,257	06/16/2017	Patented	9866642	No	is a Continuation in-part of	12/380,780
15/681,726	08/21/2017	Patented	10848330	No	is a Continuation in-part of	12/380,780
16/217,705	12/12/2018	Patented	10779177	No	is a Continuation in-part of	12/380,780
16/595,583	10/08/2019	Pending	-	No	is a Continuation in-part of	12/380,780
17/970,436	10/20/2022	Patented	12137004	No	is a Continuation in-part of	12/380,780
18/903,986	10/01/2024	Pending	-	No	is a Continuation in-part of	12/380,780

Application #	Filing or 371 (c) date	Status	Patent #	AIA	Description	Parent application #
90/019,968	05/21/2025	Pending	-	No	is a Continuation in-part of	12/380,780
13/309,463	12/01/2011	Patented	8793758	No	is a Continuation in-part of	12/380,780
14/098,527	12/05/2013	Patented	9270559	No	is a Continuation in-part of	12/380,780
13/802,483	03/13/2013	Abandoned	-	No	is a Continuation in-part of	12/380,780
14/098,523	12/05/2013	Patented	9351193	No	is a Continuation in-part of	12/380,780
14/098,527	12/05/2013	Patented	9270559	No	is a Continuation in-part of	12/380,780
14/340,270	07/24/2014	Patented	9491199	No	is a Continuation in-part of	12/380,780
14/948,082	11/20/2015	Patented	10165447	No	is a Continuation in-part of	12/380,780
13/253,013	10/04/2011	Patented	8745191	No	is a Continuation in-part of	12/380,780
13/374,959	01/24/2012	Patented	8606911	No	is a Continuation in-part of	12/380,780
14/102,436	12/10/2013	Patented	9253663	No	is a Continuation in-part of	12/380,780
14/292,282	05/30/2014	Patented	9386165	No	is a Continuation in-part of	12/380,780
14/685,506	04/13/2015	Patented	9319913	No	is a Continuation in-part of	12/380,780
15/681,726	08/21/2017	Patented	10848330	No	is a Continuation in-part of	12/380,780
17/833,684	06/06/2022	Pending	-	No	is a Continuation in-part of	12/380,780
19/088,587	03/24/2025	Pending	-	No	is a Continuation in-part of	12/380,780
19/315,091	08/29/2025	Pending	-	No	is a Continuation in-part of	12/380,780

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13/237,827	09/20/2011	Patented	8832777	No	is a Continuation in-part of	12/380,780
13/248,025	09/28/2011	Patented	8924543	No	is a Continuation in-part of	12/380,780
14/292,282	05/30/2014	Patented	9386165	No	is a Continuation in-part of	12/380,780
16/214,902	12/10/2018	Patented	10869199	No	is a Continuation in-part of	12/380,780
17/536,541	11/29/2021	Patented	11968234	No	is a Continuation in-part of	12/380,780
18/604,151	03/13/2024	Pending	-	No	is a Continuation in-part of	12/380,780
13/441,821	04/06/2012	Patented	9755842	No	is a Continuation in-part of	12/380,780
13/941,310	07/12/2013	Patented	8745220	No	is a Continuation in-part of	12/380,780
15/446,279	03/01/2017	Patented	10171988	No	is a Continuation in-part of	12/380,780
16/218,721	12/13/2018	Patented	10841839	No	is a Continuation in-part of	12/380,780
18/885,194	09/13/2024	Pending	-	No	is a Continuation in-part of	12/380,780
13/309,463	12/01/2011	Patented	8793758	No	is a Continuation in-part of	12/380,780
13/309,556	12/01/2011	Patented	8893009	No	is a Continuation in-part of	12/380,780
13/842,172	03/15/2013	Patented	9858559	No	is a Continuation in-part of	12/380,780
13/947,099	07/21/2013	Patented	10057775	No	is a Continuation in-part of	12/380,780
14/339,110	07/23/2014	Patented	9705771	No	is a Continuation in-part of	12/380,780
16/214,902	12/10/2018	Patented	10869199	No	is a Continuation in-part of	12/380,780

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14/272,274	05/07/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
17/121,717	12/14/2020	Patented	11477246	No	is a Continuation in-part of	12/380,780
18/384,772	10/27/2023	Patented	12184702	No	is a Continuation in-part of	12/380,780
13/941,310	07/12/2013	Patented	8745220	No	is a Continuation in-part of	12/380,780
14/948,082	11/20/2015	Patented	10165447	No	is a Continuation in-part of	12/380,780
16/214,902	12/10/2018	Patented	10869199	No	is a Continuation in-part of	12/380,780
16/740,625	01/13/2020	Patented	11219074	No	is a Continuation in-part of	12/380,780
18/968,336	12/04/2024	Pending	-	No	is a Continuation in-part of	12/380,780
14/214,492	03/14/2014	Abandoned	-	No	is a Continuation in-part of	12/380,780
16/214,902	12/10/2018	Patented	10869199	No	is a Continuation in-part of	12/380,780
13/309,556	12/01/2011	Patented	8893009	No	is a Continuation in-part of	12/380,780
14/098,523	12/05/2013	Patented	9351193	No	is a Continuation in-part of	12/380,780
14/181,910	02/17/2014	Patented	9571559	No	is a Continuation in-part of	12/380,780
14/098,523	12/05/2013	Patented	9351193	No	is a Continuation in-part of	12/380,780
PCT/US10/22235	01/27/2010	Published	-	-	is a Continuation of	12/380,780
PCT/US10/22238	01/27/2010	Published	-	-	is a Continuation of	12/380,780
15/211,430	07/15/2016	Patented	9615192	No	is a Continuation of	12/380,780