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## SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 18 90 78 10

**Classification of the application (IPC):**  
H01Q 1/12, H01Q 1/24, H01Q 3/06

**Technical fields searched (IPC):**  
H01Q

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
Y,D A	CN 2927337 Y (ZHAO NANHONG WANG [CN]) 25 July 2007 (2007-07-25) * figures 1, 4, 5 * * paragraphs [0008], [0009] *	1-6 7
Y A	US 5941497 A (INOUE SHIGEMI [JP] ET AL) 24 August 1999 (1999-08-24) * figures 5, 7 * * column 1, line 61 - column 2, line 67 * * column 7, line 53 - column 8, line 23 *	1-6 7
Y A	US 2015047445 A1 (YANG LAN-CHUN [TW] ET AL) 19 February 2015 (2015-02-19) * figure 6 * * paragraph [0031] *	1-4 7
Y A	CN 2927338 Y (WU CANHUA [CN]) 25 July 2007 (2007-07-25) * figure 1 * * paragraph [0022] - paragraph [0025] *	1-4, 6 7
Y A	CN 104022356 A (JIANGSU HUACAN TELECOMM CO LTD) 03 September 2014 (2014-09-03) * figure 1 * * paragraph [0019] - paragraph [0024] *	1-4, 6 7
Y A	CN 2789946 Y (SUN YIMIN [CN]) 21 June 2006 (2006-06-21) * figure 2 * * paragraph [0022] *	1-4, 6, 8 7
A	US 6232928 B1 (ZIMMERMAN KURT A [US] ET AL) 15 May 2001 (2001-05-15) * figure 6 * * column 8, line 30 - line 40 *	1-8

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search The Hague	Date of completion of the search 10 November 2021	Examiner Taddei, Ruggero
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### CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone	P: intermediate document
Y: particularly relevant if combined with another document of the same category	T: theory or principle underlying the invention
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Application number:  
EP 18 90 78 10

### DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
Y A	CN 206789681 U (COMBA TELECOM SYSTEMS CHINA HOLDINGS LTD ET AL.) 22 December 2017 (2017-12-22) * figures 2-4 * * paragraphs [0046], [0062] - [0063] *	1-6, 8 7
A	CN 105390813 A (GUANGDONG BROADRADIO COMMUNICATION TECH CO LTD) 09 March 2016 (2016-03-09) * figures 3-8 * * paragraph [0040] *	1-8

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search The Hague	Date of completion of the search 10 November 2021	Examiner Taddei, Ruggero
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**ANNEX TO SUPPLEMENTARY EUROPEAN  
SEARCH REPORT**

 Application number:  
EP 18 90 78 10

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on 10-11-2021  
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CN 105390813	A	09-03-2016	NONE	