



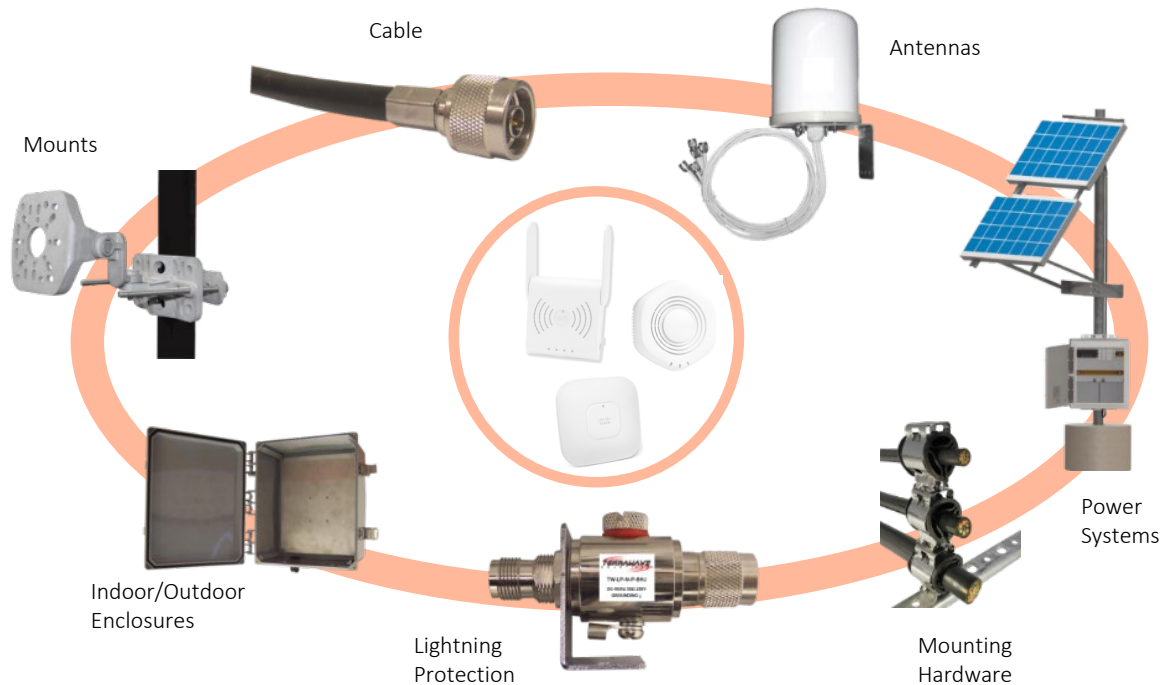
Wireless Communications RF Cable Guide 2020 (Version 2.0)

A quick reference guide for popular cable, connector
and jumper SKUs for wireless applications

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Routers PAGE 12	Cisco Moxa	Ruggedcom	NM	NM	Low Loss 195, 240, & 400 diameter RG58, 8X, 8	

RP TNC Jumpers for Cisco Access Points - 50 Ohm Coaxial Cable

Connector Configuration RP TNC M to RP TNC F				
Cable Length (ft)	100 Series RG 174	195 Series RG 58	240 Series RG 8X	400 Series RG 8/U
1.5	323098 595683 (RA)			
2		568871		
3		412943	338766	348537
5		503873	366028	503881
10		321756	308595	568140
15				503879
20				568880
25		386584		331166
30				380685

BH Bulkhead Connector
 BHL Bulkhead Connector Long
 CCP Captivated Center Pin
 F Female

Hex/ Khuri combo nut
 M Male
 RA Right Angle Connector

Connector Configuration RP TNC M to N M				
Cable Length (ft)	100 Series RG 174	195 Series RG 58	240 Series RG 8X	400 Series RG 8/U
1.5	371645			
2		361470		
3		427916	332790	306267
5		321770	317633	338316
10		311641		322443
15				352141
25				380313

ADAPTERS	
Gender Changers	
323264	RA-RPTNC Female/ Jack to RP-TNC Male/ Plug
327423	RPTNC Female/ Jack to RPSMA Male/ Plug
Connector Style Changers	
413999	RPTNC Male/ Plug to N Female/ Jack
424971	RPTNC Male/ Plug to N Male/ Plug
315485	RPTNC Male/ Plug to RPSMA Female/ Jack
467986	RPTNC Female/ Jack to N Male/ Plug

RP SMA Jumpers for Non- Cisco Access Points - 50 Ohm Coaxial Cable

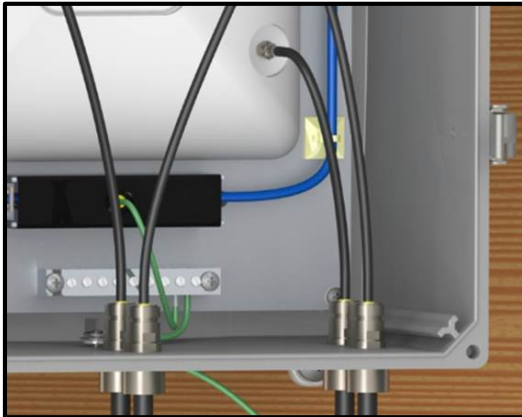
Connector Configuration RP SMA M to RP SMA F				
Cable Length (ft)	100 Series RG 174	195 Series RG 58	240 Series RG 8X	400 Series RG 8/U
1	381084			
1.5	529135 (M RA)			
2		361345		
3		379734		
5		503875		329981
10		361751	327591	301807
15				331370
20				352646

Connector Configuration RP SMA M to N M			
Cable Length (ft)	100 Series RG 174	195 Series RG 58	400 Series RG 8/U
1			
1.5	371605		
2	382489	382489	
3	312514	396206	346186
5		371440	532379
10		311462	396461
15			513272
20			529454
25			477920

BH Bulhead Connector
 BHL Bulkhead Connector Long
 CCP Captivated Center Pin
 F Female
 Hex/ Knurl combo nut.
 M Male
 RA Right Angle Connector

ADAPTERS			
Cable Extenders		Connector Style Changers	
319095	RPSMA Male/ Plug to RPSMA Male/ Plug	315485	RPTNC Male/ Plug to RPSMA Female/ Jack
Gender Changers		359153	RPSMA Male/ Plug to RPSMA Female/ Jack
327423	RPTNC Female/ Jack to RPSMA Male/ Plug	329231	RPSMA Female/ Jack to N Male/ Plug
355352	RPSMA Male/ Plug to RA-RPSMA Female/ Jack		
399662	RPSMA Male/ Plug to RPSMA Female/ Jack		

Bulkhead Style Cable Jumpers for Enclosure



Connector Configuration RP TNC M to RP TNC F		
Cable Length (ft)	100 Series	195 Series
1	532791	
1.5	416923 310402 (L)	
2	381745	321334
3	341367	

Connector Configuration RP SMA M to RP SMA F	
Cable Length (ft)	100 Series
1	
1.5	503869 590596 (RA)
2	570997
3	

Connector Configuration NM to NF	
Cable Length (ft)	100 Series
1.5	543989

L- Extended length bulkhead connector

N Jumpers - 50 Ohm Coaxial Cable

Connector Configuration N M to N M				
Cable Length (ft)	195 Series RG 58	240 Series RG 8X	400 Series RG 8/U	600 Series
1	366282	576183		
2	311987	384278 329903	329903	
3	318376	304696 352798 (LMR)	311260	
4	312720	302314	321799	
5		394908	327300	
6		364240 572784	382907	
10	301152	332700 (LMR) 572784	340960	321765
15			390189	393241
20		383408 (LMR)	330353	
25			504758	325343
30			390920	
35			568882	
50			370875	340808

F Female
Hex/ Knurl combo nut
M Male
RA Right Angle Connector

BH Bulkhead Connector
BHL Bulkhead Connector Long
CCP Captivated Center Pin

Connector Configuration N M to N F			
Cable Length (ft)	195 Series RG58	240 Series RG 8X	400 Series RG 8/U
1		374401 (LMR)	
1.5	543989		
3			312425 (LMR)
5			344545 (LMR)
10			372221
15			575924 (LMR)
20			363264 (LMR)
30			330870
50			360778

ADAPTERS

Cable Extenders

424995	N Female/ Jack to N Female/ Jack
314245	N Male Plug to N Male/Plug
359936	N Male / Plug to N Female / Jack
505817	N Female / Jack to RA N Male / Plug

DAS Non-Low PIM Jumpers Cross Reference

RG 142 Plenum Cable Jumpers									
Cable Length	NM-NM	NM-NF	NM-SMA M	NM- BNC M	NM-TNC M	QM-QM	NM-QNM	DM-QNM	NM-QM
2	343504		365508	458907					592164
3	324975	332849	473961	343019	498962	553420	522513	591580	514483
4	353073								
6	312466		362926				583101 583187 (RA)		510558
10	392785								514479

Low Loss Plenum Jumpers			
Cable Length	195 Series RG 58	240 Series RG 8X	400 Series RG 8/U
2 (ft)	521657		518197 580194 (Ventev NM-NF) 518197 (LMR NM-NF)
3 (ft)	538342	322990	314761 580193 (Ventev) 314961 (LMR)
4 (ft)	521659		
6 (ft)	538339		337605 352242
50			534982
75			536985

DAS Low PIM Jumpers Cross Reference

LOW PIM .141 Plenum Cable (50 Ohm Braided Cable)									
Cable Length (ft)	NM-NM	NF- NM	7/16 DIN M-NM	7/16 DIN M	4.1/ 9.5 M	4.3/10 M	4.3/10 M- NM	4.3/10M-NF	7/16 DIN F-BH-4.3/10 M
1 m (3 ft)	557636 (V) 515354 (M)	580190 (V) 504626 (M)	554808 (V) 544646 (M)	555195 (V) 514645 (M)	590191 (V)	580191 (V)	595142 (V) 593709 (RA V) 505391 (M)	551290 (RA/V)	551130 (V)
2 m (6 ft)	555189 (V) 515353 (M)	555191 (V)	584475 (V)				549858 (V) 556026 (M)		
3 m (10 ft)	590190 (V)	594476 (V)	554808 (V)						

TFT-402 LF Plenum Cable (Braided Cable)													
Cable Length	NM-NM	NM-NF	Mini DIN F- Mini Din M	RA QMA M- RA SMA M	7/16 DIN M - NF	QM - 4.3/10 M	4.3/10 M-NM	SMA M- SMA M	QM-QM	DIN F- NM	4.3/10 F-4.3/10M	4.3/10M-NF	4.3/10M-4.3/10M
1 m (3ft)	343504 (V) 542136 (TMW)	550284 (V)	553898		592734 (V)	551607 (V)	582220 (V)		553881 (V)	590695 (V)	593848 (V)	546927 (V)	
2m (6ft)		585780 (V)			549220 (V)			520074 (V)		551322 (V)			594652 (V)
3 (10ft)	353073			514370 (TMW)				506497 (V)	535757 (V)				

V Ventev cable
TMW Times Microwave cable

DAS Low PIM Jumpers Cross Reference

LOW PIM SPP-250 Plenum Cable (Corrugated Cable)										
Cable Length (ft)	NM-NM	NM- NF	Mini DIN F- Mini Din M	NM- DIN M	NM-SMA M	DIN M- DIN M	4.3/10 M-4.3/10M	4.3/10 M-NF	QM- NF	7/16 DIN M- NF
1 m (3 ft)	570736 (TMW)	579215 (TMW)		534681 (TMW)	566819 (TMW)	525682 (TMW)	549520 (V) 591038 (TMW)	582694 (V)	582617 (V)	523879 (V) 502735 (TMW)
2 m (6 ft)	534265 (TMW)	525785 (TMW)	581608 (V)	534682 (TMW)			548353 (V)			
3 m (10 ft)	570733 (TMW)		554808 (V)				596647 (V)			

Bulkhead Adapters Low PIM	
NM-NF	7/16 DF – 7/16 DF
585754	549244

V- Ventev cable
 TMW- Times Microwave cable

NM to SMA M and TNC M Jumpers - 50 Ohm Coaxial Cable

Connector Configuration N Male to SMA Male			
Cable Length (ft)	195 Series	240 Series	400 Series
1	306786		
1.5	565798	568877	
2	371210		
3	353486	568370	
5		308809	
10	568874	472686	376685
15	351909		345320
25			576808
30			303466

BH Bulkhead Connector
 BHL Bulkhead Connector Long
 CCP Captivated Center Pin
 F Female
 Hex/ Knurl combo nut
 M Male
 RA Right Angle Connector

Connector Configuration N Male to TNC Male			
Cable Length (ft)	195 Series	240 Series	400 Series
1.5	526059		
2	347373	304782	
3	501237	302551	394761
5	567537	322231	
10		345092	544008
15		566086	569404
20			358277
30			397428

ADAPTERS	
Cable Extenders	
437905	SMA Female/ Jack to SMA Female/ Jack
Gender Changers	
323264	RA-RPTNC Female/ Jack to RP-TNC Male/ Plug
524204	TNC Male/ Plug to TNC Female/ Jack
Connector Style Changers	
505801	NF to TNCM
312060	SMA Male/Plug to TNC Female/ Jack
535801	SMAF to TNCM

TWO-WAY RADIOS and ROUTERS

N Jumpers - 50 Ohm Coaxial Cable

Connector Configuration N M to N M				
Cable Length (ft)	195 Series RG 58	240 Series RG 8X	400 Series RG 8/U	600 Series
1	366282	576183		
2	311987	384278 329903	329903	
3	318376	304696 352798 (LMR)	311260	
4	312720	302314	321799	
5		394908	327300	
6		364240 572784	382907	
10	301152	332700 (LMR) 572784	340960	321765
15			390189	393241
20		383408 (LMR)	330353	
25			504758	325343
30			390920	
35			568882	
50			370875	340808

Connector Configuration N M to N F			
Cable Length (ft)	195 Series RG58	240 Series RG 8X	400 Series RG 8/U
1		374401 (LMR)	
1.5	543989		
3			312425 (LMR)
5			344545 (LMR)
10			372221
15			575924 (LMR)
20			363264 (LMR)
30			330870
50			360778

ADAPTERS	
Cable Extenders	
424995	N Female/ Jack to N Female/ Jack
314245	N Male Plug to N Male/Plug
359936	N Male / Plug to N Female / Jack
505817	N Female / Jack to RA N Male / Plug

F Female
Hex/ Knurl combo nut
M Male
RA Right Angle Connector

BH Bulkhead Connector
BHL Bulkhead Connector Long
CCP Captivated Center Pin



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Cable Configuration Options

Cable Considerations

- Inside enclosures or short antenna extensions
- Use Ultraflex (UF) cable for repeated bending

Cable Dia.	Antenna extensions		Feeder cable runs			
	1'	3'	5'	10'	50'	100'
195	95%	88%	81%	65%		
240	97%	92%	86%	75%	23%	
400		95%	93%	86%	47%	
600			95%	90%	61%	37%

Example: A 1' run of 195 cable (Dia = 0.195") will transmit 95% of a 2400MHz signal. Higher frequency signals experience more loss.

Recommendation: Cable should be selected with efficiency > 50%. For every 3dB of loss is 50% efficient.

Recommendation: For Small Form Factor/Low power radios (e.g. modems, SCADA radios) use higher efficiency jumpers

Connector Considerations

Right Angle or bulkhead versions

Use straight connectors

Use straight connectors

Connector Descriptions

Connectors

Straight Male/Female

Most popular orientation with least insertion loss



Right Angle Male

Useful for tight bend radii but has more loss than straight



Bulkhead Female

Typically used for mounting to an enclosure



Captivated Center Pin (CCP)

Best for field terminations with center pin already inserted in body



Cisco / Ventev Cable Assemblies Cross Reference

Cisco Part#	Description	Ventev Tescos SKU	TESSCO Description
AIR-CAB002L240-N=	2 ft low loss cable with straight N to Rt Angle N-M	555081	2' TWS195FR RANM-NM
AIR-CAB005LL-N	5 ft low loss cable with straight N to Rt Angle N-M	356697	5' TWS400 NM RANM
AIR-CAB005LL-R	5 ft low loss cable with RP-TNC plug to RP-TNC jack	366028	5 ft Jumper, TWS240, RP-TNC M to RP-TNC F
AIR-CAB005LL-R-N=	5 ft low loss cable with RP-TNC plug to Rt Angle N-M	523408	5' TWS400 RPTM NMRA
AIR-ACC2537-060	5 ft RG-58 type cable w/ RP-TNC plug to RP-TNC jack	503873	5' TWS195 RPTF RPTM
AIR-CAB010LL-N	10 ft low loss cable with straight N to Rt Angle N-M	523414	10' TWS400 NM NMRA
AIR-CAB020LL-R	20 ft low loss cable with RP-TNC plug to RP-TNC jack	568880	20 ft jumper, TWS400, RP-TNC M to RP-TNC F
AIR-CAB050LL-R	50 ft low loss cable with RP-TNC plug to RP-TNC jack	503889	50 ft jumper, TWS400, RP-TNC M to RP-TNC F
AIR-CAB100ULL-R	100 ft ultra low loss cable RP-TNC plug to RP-TNC Jack	300543	100 ft jumper, TWS400, RP-TNC M to RP-TNC F
AIR-CAB150ULL-R	150 ft ultra low loss cable RP-TNC plug to RP-TNC Jack	351268	150' TWS600 RPTF RPTM

Ventev Cable Cross Reference

Ventev TWS Cable (OD") sku		RG Equivalent (OD")	Times Microwave	Belden	Andrew/ Commscope
50 Ohm Cable					
TWS 100 (0.100")	SKU 370169	RG-316 (0.098") RG-174 (0.100") RG-188 (0.100") RG-316/U (0.098")	LMR-100	8216	
TWS-141 (0.163)	SKU 556047	RG-402/U SemiRigid Low PIM 141		1673A	
TWS RG142 (0.195)	SKU 582340	RG-142 RG-55		83242	
TWS 195 (0.195")	SKU 340638	RG-58 (0.195")	LMR-195	8219 8259	CNT-195 WBC-195
TWS 200 (0.195")	SKU 370218	RG-58 (0.195")	LMR-200	7807	WBC-200
TWS RG223 (0.209")	SKU 374771	RG-223 (0.212")			
TWS 240 (0.240")	SKU 320857	RG-8X (0.242")	LMR-240		CNT-240
TWS 400 (0.405")	SKU 380348	RG-8/U (0.405") RG-213(0.405")	LMR-400	8267	CNT-400
TWS 600 (0.59")	SKU 380359		LMR-600		CNT-600 WBC-600
75 Ohm Cable					
TWS RG-11 (0.395")	SKU 577205	RG11/U (0.412")		8213	

Connector Selector Guide

For Cables TWS 100, Semiflex 141 (Low PIM) and RG142

VNV=370169 (LL) Cable Type= 050						
Cable	RF Connector	Gender	Polarity	Straight	Right Angle	Bulkhead
100	BNC	Female	Standard	489956		433936
100	BNC	Male	Standard	466973		
100	N	Female	Standard	463940		414984
100	N	Male	Standard	481930		
100	SMA	Female	Standard	456942		
100	RP SMA	Male	Reverse	414908		
100	RP SMA	Female	Reverse	446914	534532	532836
100	RP TNC	Female	Standard	487998		456996
100	RP TNC	Female	Reverse	459956	443991	
100	TNC	Male	Standard	419903		
100	TNC	Female	Standard	438970		494915
100	MCX	Male	Standard		426939	
100	MMCX	Female	Standard	492858	370114	
100	MMCX	Male	Standard	430954	477908	

VNV=5560487 (Semiflex 141) TMW= 507669 (TFT-402)				
Cable	RF Connector	Gender	Straight	Bulkhead
141	N	Male	489956	
141	N	Female	581403	
141	DIN	Male	582024	
141	DIN	Female		581404
141	4.1/9.5	Male	591404	
141	4.1/9.5	Female		591897
141	4.3/10	Male	556402	
141	4.3/10	Female		592024

VNV=582340 (RG142 Plenum) BLD= 59787				
Cable	RF Connector	Gender	Polarity	Straight
RG142	BNC	Male	Standard	558299
RG142	N	Female	Standard	557681
RG142	N	Male	Standard	552318
RG142	SMA	Male	Standard	592682
RG142	TNC	Male	Standard	554292

Connector Selector Guide

For Cables TWS 195 and TWS 200

Cable	VNV=340638 (LL), 344479 (FR), 518516 (LL Plenum) MW= 40924 (LL), 422765 (FR), 443757 (UF) Cable Type= 051							
	Cable	RF Connector	Gender	Polarity	Straight	Right Angle	CCP	Bulkhead
	195	BNC	Female	Standard	431978			362963
	195	BNC	Male	Standard	415977			
	195	N	Female	Standard	466951			451950
	195	N	Male	Standard	430967			
	195	RP N	Female	Reverse	493983			
	195	RP BNC	Female	Reverse	481989			
	195	RP SMA	Female	Reverse	475960	444926	358950	303878
	195	RP SMA	Male	Reverse	432900	314792	368457	
	195	SMA	Female	Standard	486992			453939
	195	SMA	Male	Standard	488957	419972		
	195	TNC	Female	Standard	496905			
	195	TNC	Male	Standard	423926			
	195	RP TNC	Female	Reverse	488984		359366	487973
195	RP TNC	Male	Reverse	463990	308167			

VNV=370218 TMW=89695					
Cable	RF Connector	Gender	Polarity	Straight	Bulkhead
200	BNC	Male	Standard	334631	
200	N	Female	Standard	394531	
200	N	Male	Standard	324813	
200	SMA	Female	Standard		354802
200	SMA	Male	Standard	304902	
200	RP SMA	Male	Reverse	334415	
200	TNC	Male	Standard	384280	
200	RP TNC	Male	Reverse	314023	
200	RP TNC	Female	Reverse	344294 (99'd)	
200	UHF	Male	Standard	374944	

Connector Selector Guide

For Cable TWS 240

Cable	VMV=320857 (LL), 324598 (FR) 350191 (UF) TMW = 35065 (LL), 40560 (UF), 86436 (LLPL)	Cable	RF Connector	Gender	Polarity	Straight	Right Angle	CCP	Bulkhead
		240	BNC	Male	Standard	384862			
		240	N	Female	Standard	354507			
		240	N	Male	Standard	373491		348825-Hex	
		240	RP SMA	Male	Reverse	364735		338804	
		240	RP SMA	Female	Standard	312606 (Gold plate)		368587	394980
		240	SMA	Female	Standard	304759			
		240	SMA	Male	Standard	315399	368720	318734	
		240	TNC	Female	Standard	394258			
		240	TNC	Male	Standard	384028			
		240	RP TNC	Male	Reverse	394461	358152		
		240	RP TNC	Female	Reverse	354039			
		240	UHF	Male	Standard	394841			

Connector Selector Guide

For Cable TWS 400

Cable	VNV=380348 (LL), 384674 (FR) 343685 (DB), 511479 (LL Plenum) TMW= 59520 (LL), 27046 (UF), 46135 (FR), 44370 (DB) 97134 (LLPL) ANR= 429329 (LL), 470960 (LLPL)							
	Cable	RF Connector	Gender	Polarity	Straight	Right Angle	CCP	Bulkhead
	400	BNC	Female	Standard	488953			
	400	BNC	Male	Standard	443916			
	400	N	Female	Standard	422933		346020	483983
	400	N	Male	Standard	462958	436949	346795 348407-hex	
	400	RP N	Female	Reverse	452992			
	400	RP N	Male	Reverse	498921			
	400	RP BNC	Male	Reverse	466931			
	400	RP SMA	Female	Reverse	432923		368283	
	400	RP SMA	Male	Reverse	464918		318283	
	400	SMA	Female	Standard	479910			
	400	SMA	Male	Standard	451992			
	400	RP TNC	Female	Standard	440939			452950
	400	RP TNC	Male	Standard	416952	328755	389434	
400	TNC	Male	Standard	415903		367873		
400	TNC	Female	Standard	493911		389624		

Connector Selector Guide

For Cable TWS 600

Cable VNV=380359 (LL), 334208 (FR), 309488 (DB) TMW=86672 (LL), 56313 (FR), 50505 (LLPL), 39425 (UF), 15605 (DB)	Cable	RF Connector	Gender	Polarity	Straight	CCP	Bulkhead
	600	BNC	Male	Standard	448980		
	600	N	Female	Standard	471981 (98)	376108	438931
	600	N	Male	Standard	474949 378005-Hex	316616-Hex 328387-Hex	
	600	TNC	Male	Standard	462916		
	600	RP TNC	Female	Standard	498985	369972	
	600	RP TNC	Male	Standard	491959		



ventev

www.ventev.com/intra