# APPLICATION NOTE UNRIVALED CONNECTIVITY WITH ETHERNET

### **ETHERNET ASSEMBLY SOLUTIONS FOR MULTIPLE CATEGORIES**

Explore the comprehensive range of cable assemblies by PIC Wire & Cable, designed for seamless compatibility with a diverse array of Ethernet categories, ideal for aerospace and defense applications. From CAT 5e to CAT 8, our PICMates cables are engineered to meet the rigorous demands of your robust aerospace and defense environments.

PICMates Ethernet cable assemblies are available in varying lengths, offering flexibility to suit your specific needs. With the option of RJ45 connectors, you can customize your solution for optimal performance. Customize your configuration by specifying the use of 568A or 568B termination standards, or opt for an unterminated version for added flexibility to configure your assemblies as desired.

Every cable in our offering undergoes the PIC commitment to excellence. Meticulously crafted and rigorously tested, every assembly ensures unparalleled performance, setting the standard for reliability and functionality in the ever-evolving landscape of connectivity solutions.

To see a complete offering of our Ethernet cables and connectors, please visit www.PICwire.com.

ETHERNET CABLE ASSEMBLIES								
CABLE P/N	ABLE P/N SPEED RATING PAIRS		DATA CONDUCTOR	PLUG w/ATUM	PLUG w/BOOT	MAX LENGTH IN (FT)		
E10424	CAT 5e	2	24 AWG Stranded SPC	N/A	190061*	3,216 (268)		
E50824	CAT 5e	4	24 AWG Stranded SPC	110787	110339	3,216 (268)		
E6A0824	CAT 6a	4	24 AWG Stranded SPC	111170	111172	2,952 (246)		
E6A5824	CAT 6a	4	24 AWG Stranded SPHSCA	111179	111181	3,552 (296)		
E6A6824	CAT 6a	4	24 AWG Stranded SPHSCA	111170	111172	2,952 (246)		
E6A5826	CAT 6a	4	26 AWG Stranded SPHSCA	111174	111176	2,760 (230)		
E6A6826	CAT 6a 4 26 AWG Stranded SPHSCA		111131	110725	2,568 (214)			
E74824	CAT 7	T 7 4 24 AWG Stranded SPCA		111179	111181	3,552 (296)		
E74826	CAT 7	4 26 AWG Stranded SPCA		111174	111176	2,760 (230)		
E84824	CAT 8	4	24 AWG Stranded SPCA	111107**	N/A	1,080 (90)		

Materials Key: SPC – Silver-Plated Copper, SPCA – Silver-Plated Copper Alloy, SPHSCA – Silver-Plated High Strength Copper Alloy NOTE: \* 568A Only, \*\* 586B Only





www.PICwire.com | 800.742.3191 | sales@theangeluscorp.com

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W -

XV -

#### ASSEMBLY PART NUMBER BUILDER

Accelerate the cable assembly procurement process by building a part number with design details that meet an application's specific requirements. Ready to use engineering drawings are provided to streamline the FAA submission process for part modifications and installations.

Engineering drawings for cable assemblies are available for download at www.picwire.com/assemblies/assembly-worksheets.

YYYY -

ZU

Sample Part Number: 11012-4952-

				0.01	
	W = CABLE	X	V= CONNECTOR	CU	NFIGURATION
W	P/N	Х	END A	۷	END B
0		1	N/A	1	N/A
	E10424	2	190061*	2	190061*
		3	Unterminated	3	Unterminated
1		1	110787	1	110787
	E50824	2	110339	2	110339
		3	Unterminated	3	Unterminated
		1	111170	1	111170
2	E6A0824	2	111172	2	111172
		3	Unterminated	3	Unterminated
		1	111179	1	111179
3	E6A5824	2	111181	2	111181
		3	Unterminated	3	Unterminated
4		1	111170	1	111170
	E6A6824	2	111172	2	111172
		3	Unterminated	3	Unterminated
	E6A5826	1	111174	1	111174
5		2	111176	2	111176
		3	Unterminated	3	Unterminated
6	E6A6826	1	110731	1	110731
		2	110725	2	110725
		3	Unterminated	3	Unterminated
		1	111179	1	111179
7	E74824	2	111181	2	111181
		3	Unterminated	3	Unterminated
8	E74826	1	111174	1	111174
		2	111176	2	111176
		3	Unterminated	3	Unterminated
9	E84824	1	111107**	1	111107**
		2	N/A	2	N/A
		3	Unterminated	3	Unterminated
	NOTE: * 568A Only, ** 586B Only				

<b>OTE:</b> *	568A Only,	** 5	86B Only

YYYY = LENGTH (INCHES)			ZU = TERMINATION STANDARD				
YYYY	LENGTH		Z	END A	U	END B	
0006	6"		1	568A	1	568A	
			2	568B	2	568B	
3552	3552"		3	Unterminated	3	Unterminated	

#### CABLE ASSEMBLY EXAMPLE:

Construct an Ethernet cable assembly effortlessly by following a few simple steps. Refer to the example provided below for guidance:

E74824 is the desired cable with an RJ45 connector with boot on End A. unterminated End B. 120 inch length, and 568A termination standard on End A.

To create a part number for this cable assembly we would select the following values:

- 1. W = 7 for E74824 cable
- 2. X = 2 for 111181 plug w/ boot connector on End A
- 3. V = 3 for unterminated End B
- 4. YYYY = 0120 for 120 inch length
- 5. Z = 1 for 568A termination standard on End A
- 6. U = 3 for unterminated termination standard on End B

### **COMPLETE ASSEMBLY PART NUMBER:** 11012-4952-7-23-0120-13

For more information on our Ethernet cables and connectors, please visit www.PICwire.com or contact PIC sales at sales@theangeluscorp.com.



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