# Comant CI 428-200

**ComDat GPS WAAS** 



### The most important thing we build is trust

### CI 428-200 ComDat<sup>®</sup> GPS WAAS

Comant's newest ComDat GPS WAAS antenna designed specifically to meet the GPS WAAS Gamma 3 specificatons required by the Garmin G1000 system.

Matches the standard ARINC footprint found on many twins and business jets.

Meets RTCA DO 160D operating standards including direct effects lightning.

Gamma 3 WAAS allows for primary navigation using GPS for all phases of flight including precision LPV approaches.

Not compatible with hand-held GPS receiver units.

## Applications

Most aircraft up to and including business jets. Consult your FBO or installation shop for best application information.

#### Frequencies Covered

GPS 1575.42 MHz / 26.5 - 30.1 dB Gain

#### **Specifications**

#### **GPS** Preaplifier Characteristics

Frequency	1575.42 +/-3 MHz	
VSWR	1.5:1 Maximum	
Polarization	RHCP	
Radiation Pattern	Hemispherical	
Output Impedance	50 Ohms	
Gain @ 1575.42 MHz	26.5-30.1 dB	
DC Voltage	4 to 24 Volts	
DC Current	40mA Typical / 60mA Maximum	
Noise Figure	2.5 dB Maximum	
Selectivity	-50 dB Min. @Satcom 1626.5 MHz	

#### Mechanical

Weight	6.2 Ounces
Finish	Glossy White
Connector	TNC (Female)
'O' Ring Gasket	70486
Environmental	
RTCA Env.	DO-160D
Federal Specifications	
TSO	C144



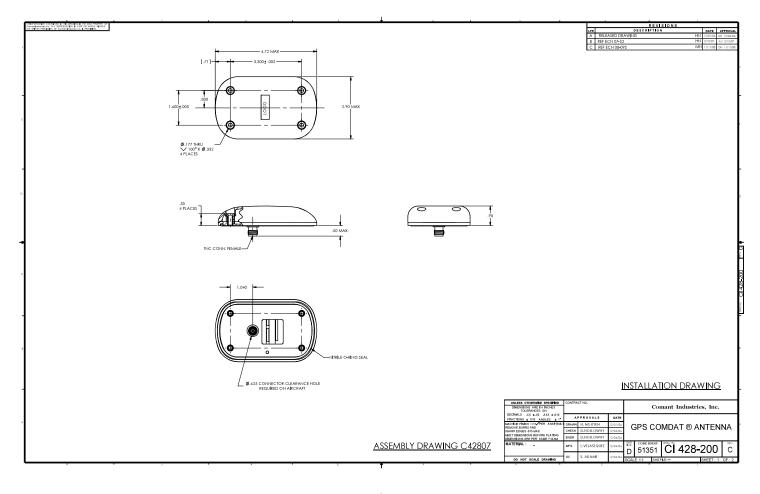
 Order at:

 Tel:
 714-870-2420
 Fax:
 714-870-6294

 Email:
 comantorders@cobham.com

# WARNING: Use factory supplied drawings and specifications for installation. Refer to FAA AC 43.13-2B for installation guidelines.

www.cobham.com



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WITTEN PERMITIPEL OF Converting and in the LE PROFILED.			LTR DESCRIPTION DATE APPROVAL SEE SHEET 1
1	.0 GPS PASSIVE ANTENNA CHARACTERISTICS (T <sub>A</sub> =-55° C TO +85° C )		
	1.1 FREQUENCY1575.42 ± 3MHz		
	1.2 POLARIZATIONRIGHT HAND CIRCULAR		
	1.3 AXIAL RATIO3.0 dB ON BORESIGHT ( ZENTH ) MAX.		
	1.4 RADIATION GAIN PATTERN MIN MUM	3.0 ANTENNA WEIGHT 6.2 Oz. MAX.	
	-2.0 dBic > 19* ELEVATION -3.0 dBic 10* ELEVATION	4.0 TSO C144. RTCA DO=160D ENV. CAT.: [F2X]ACB[s(L)T(C,C1,R)]XRFDXSZXXA(CF)[ZC][WW[H]A3J33][1B]CA	
	-3.5 dBic 5° ELEVATION -7.5 dBic 0° ELEVATION +5.0 dBic (ZEMTH) 0° ELEVATION	5.0 FINISH: GLOSSY WHITE	
	+5.0 BBR ( ZENTH ) 50° ELEVATION GAIN PATTERN MEASURED ON 4° CIRCULAR ROUND PLANE WITH 1.5° RADIUS EDGES.	6.0 DELETED	
		7.0 A42809 INSTALLATION INSTRUCTIONS SUPPLIED WITH ANTENNA.	
2	.0 GPS PREAMPLIFIER CHARACTERISTICS (T <sub>A</sub> =-59° C TO +85° C )		
	2.1 FREQUENCY1575,42 ± 3MHz		
	2.2 OUTPUT IMPEDANCE50 OHMS ( NOMINAL )		
	2.3 OUTPUT VSWR1.5: 1 MAX. R/L		
	2.4 GAIN AT 1575.42 ± 3MHz28.5 dB MIN = 30.1 dB MAX.		
	2.5 NOISE FIGURE 2.5 dB MAX		
	2.6 SELECTIVITY MAXIMUM BORESIGHT RELATIVE FREQUENCY RESPONSE		
	1151.5000         ≤1         1155.5000         ≤1         1155.5000         ≤0         5		
	1504.42 MHz < f < 1555.42 MHz		
	1558.42 MHz < f < 1591.92 MHz 0 dB 1591.92 MHz 5 f < 1605.42 MHz LINEARLY DECREASING TO -25.35 dB		
	1605.42 MHz < f < 1625.42 MHz FROM 25.35 dB TO 50 dB 1625.42 MHz 5 f ≤ 1685.42 MHz FROM 50 dB TO 50 dB		
	168542 MHZ 3 1 3 2000.00 MHZ		
	2.7 DC VOLTAGE     4 TO 24 VUC     2.8 DC CURRENT 40 mA TYP / 60 mA MAX.		
	2.9. STABILITY LINCONTITIONALLY STABLE FOR ANY		
	LOAD IMPEDANCE ON THE CONNECTOR 2.10 BURNOUT PROTECTION		
	2.11 PASS BAND GAIN VARIATION ± 3 MHz 1.0 dB MAX.		
	± 2 MHz 1.0 dB MAX		
	2.12 DIFFERENTIAL GROUP DELAY (3 dB BAND WIDTH) <25 ns10 ns TYPICAL		
	2.13 <u>1dB COMPRESSION POINT</u> -25 dBm BETWEEN 1557 MHz AND 1593 MHz     -UINEARLY INCREASING FROM-123 dBm TO = 15 dBm BETWEEN 1593 MHz AND 1610 MHz     -UINEARLY INCREASING FROM-13 dBm TO = 16 dBm BETWEEN 1510 MHz AND 1625 MHz		
	HUMBARLI INCREMENTATION TO USING TO USING THE INCREMENTATION AND THE MARKET		
	-LINEARLY INCREASING FROM-10 dBm TO + 23 dBm BETWEEN 1525 MHz AND 1315 MHz -LINEARLY INCREASING FROM +6 dBm TO + 20 dBm BETWEEN 1560 MHz AND 2000 MHz		
	2.14 PULSE POWER SATURATION RECOVERY 0F 3 08 MP EAK POWER VILLISS WITH HULSS WITH HULSS WITH		
	OF + 30 dBm PEAK POWER PULSES WITH PULSE WIDTH OF 1 ms AT FREQUENCIES AND PRF LISTED BELOW:		
	1315.00 MHz 22 PPS		
	131500 MHz 22 PPS 132500 MHz 100 PPS 156542 MHz 100 PPS		
	155.42 MHz 100 PPS 158.42 MHz 100 PPS		
	1610.00 MHz 00 PPS 1626.50 MHz 100 PPS 2000.00 MHz 6 PPS		
	2.15 RATIO @ 5" ELEVATION > 31.6 dB/K		
		<u>A</u>	NTENNA NOTES AND SPECIFICATIONS
			Comant Industries, Inc.
			GPS COMDAT ® ANTENNA
			DAD CODE IDENT DAG NO. 10
			51351 C 428-200 C
			SCALE:CAD/FLE:SHEET: 2 OF 2
8	7 0 3	4 3	2