BAE Systems produces the AN/APX-111(V) combined interrogator/transponder (CIT) systems for the F/A-18 aircraft.

With more than seventy years experience, BAE Systems leads the industry in identification friend or foe (IFF) development and technology. The AN/APX-111(V) CIT continues this legacy of IFF expertise with the highest-performance and most cost-effective IFF system available. The AN/APX-111(V) CIT system uses Mode 5 and Mode S to prevent fratricide and positively identify coalition forces, helping determine targets in the immediate battlespace and well beyond a pilot’s visual range. Currently fielded on multiple version F/A-18 aircraft, the AN/APX-111(V) is operating on both U.S. and international platforms.

Features and benefits
- Complete Mark XII or Mark XIIA identification system (including crypto computer) in one unit
- Mode S, Level 2-capable (ELS and EHS) in accordance with DO-181E
- MIL-STD-1553 bus interface
- AIMS 03-1000A certified
- Compliant with ADS-B Out (DO-260B) via 1090 MHz ES
- Available with variable interrogator transmitter
### Specifications

| Unit | Combined interrogator/transponder RT-1763(V)  
KIV-6/TSEC or KIV-78 TSEC cryptographic computer appliqué  
Interrogator antenna (see below) |
|------|----------------------------------------------------------------------------------|
| Interrogator subsystem | Detection range  
Sector coverage  
Azimuth accuracy  
Range accuracy and resolution  
In-beam targets  
Modes |
| | >100 nmi  
+/- 60 degrees AZ, +60, -30 degrees EL  
±2 degrees  
<500 feet (156 meters)  
32  
1, 2, 3/A, C, 4 and 5 |
| Interrogator antenna | Beam-forming network  
Fuselage-mounted antenna elements  
or beam-forming network  
Conformal antenna system array |
| | C-12481 (V)  
AS-4440 (V) (quantity 5)  
C-12625 (V)  
AS-4518 (V) |
| Interrogator unique features | Front-panel transmit  
Front-panel receive  
Monopulse receive, AJ protection, reply evaluation, and degarbling |
| | 1.4 kilowatts  
-81 dBm |
| Dimensions and weight | CIT with KIV-6 installed  
CAS BFN  
CAS array |
| | 8.17” height x 5.75” width x 12.61” depth, 29 pounds  
3.00” height x 12.12” width x 7.80” depth, 13 pounds  
1.64” height x 18.50” width x 17.28” depth, 12 pounds |
| Transponder subsystem | Front-panel transmit  
Front-panel receive  
Modes |
| | 500 watts  
-76 dBm  
1, 2, 3/A, C, 4, 5, and 5 |
| System parameters | MTBF  
System  
CIT only  
MTTR  
Fault detection  
Fault isolation  
Prime power  
Voltage  
Consumption  
Forced-air cooling |
| | 2,500 hours  
>3,500 hours  
0.25 hours  
>98 percent  
>99 percent  
28 Vdc  
180 watts  
CIT WRA only |

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