



Now you are able to develop your own wireless telematic and M2M applications. Use your own skill in C, reuse existing software together with a lot of included powerful modules. The MTU-5g is equipped with a 12-channel GPS receiver to maximize the reliability in professional tracking and positioning applications.

## Application Development Kit for MTU-5g

### Product Snapshot

- An MTU-5g with antennas and serial cable
- C-Compiler
- Software libraries with full API-documentation
- A rich set of application examples

### Application Development Kit for MTU-5i

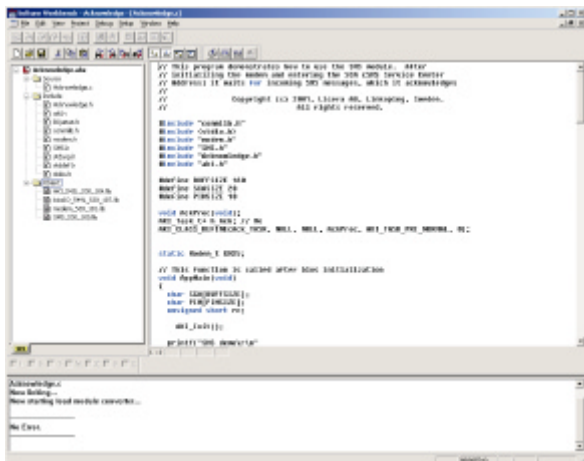
Providing a technically advanced platform for the wireless telematic and M2M community, Licera now offering a powerful application development kit. The development kit is designed for end users, third-party software developers and service providers. The ADK consists of a development suit including a graphical C-Compiler (IDE), full API-documentation, code examples and much more.

### Software platform

The software solution is designed in layered structure which makes it easy to add new software modules. The generic software libraries together with the special M2M-utility library helps the developer focusing on the target application. Communicating using SMS, CSD, serial ports (RS-232 and RS-485) or getting an accurate position from the GPS is made very easy. The process oriented operating system enables multi-threaded software designs which, together with the memory manager, creates a future proof environment. Storing persistent data is handled using the embedded file system (EFS) which of course has automatic crash-recovery. Licera will continue to update the software library with new features and functionality to provide you with the best wireless telematic platform on the market.

If you're a third-party software developer, solution provider, service provider or end user you can now take full advantage of our mobile telematic platforms. Software is developed using ANSI-C in a full featured IDE (Integrated Development Environment). The resulting firmware are then easily downloaded with a serial cable connected between your PC and the MTU.

The IDE gives the developer full control of the sourcecode.



## Software modules

### GPS

- Handles both active and passive antenna
- Easy-to-use data structures
- Prevents antenna shortcircuit overload
- Supports fast warm start

### OS

- Multi-threaded
- Process priorities and messages
- Dynamic memory manager

### SMS

- Intelligent queuing with automatic retransmission
- Handles both 7 and 8 bit encoding
- Presents originating phone number

### Modem

- Automatic dial-up service
- Hangup detection
- CLIP (Calling Line Identification Presentation)
- Voice and data calls (V.24 and V.110)

### EFS (Embedded File System)

- Persistent data storage
- Automatic crash recovery
- ANSI-C syntax

### Comm (Serial communication)

- Encapsulates all streaming channels
- Easy configuration

### DIO (Digital Inputs and Outputs)

- Programmable interrupts
- Detection of overloaded and shortcircuited outputs
- Open load monitoring

### RTC (Real-Time Clock)

- Presents time and date
- ANSI-C syntax

### Example: Acquiring GPS position

```
GPS_Pos* pos;
pos = GPS_GetPos();
if( pos ){
    //Operation on structure
    printf("Lat=%f ... Fix=%d", pos->lat,
        pos->lon, pos->height, pos->sats,
        pos->hour, pos->minute, pos->second,
        pos->fix );
    GPS_FreePos(pos);
} else {
    printf("No reading\r\n");
}
```

### Example: Set up a datacall

```
Modem_t *pModem;
Port_t *pPort;

//Use the GSM serial line as modemport
pPort = PORT_GSM;

Modem_Init( pModem, pPort, GM25, "1432");

if( Modem_CallData( pModem, "+4613363920" ) !=
    MODEM_ERROR_NONE ) {
    printf("Modem not ready!\r\n");
}
```

### Example: Send an SMS

```
SMS_t* pSMS;
unsigned short id;
char* recipient="+46707573920";
char* SCA="+46707990001";

//The SMS will be sent without retry
//and given normal priority in queue
pSMS = SMS_CreateMessage( recipient, SCA, msg,
    SMS_CODING_7BIT, 1, 0);

id = SMS_Send( pSMS );
```

## Deliverables

This product ships with:

- MTU-5g
- 18-pin socket
- GSM antenna
- GPS antenna
- Serial cable
- CD with compiler, documentation and software libraries
- 3,5"-disk with additional software libraries (for GPS-development).

## Order Number

5100 00001 7 (ADK for MTU-5g)

## Related products

ADK for MTU-5i,  
MTU-5,  
MTU-5i,  
MTU-5g

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