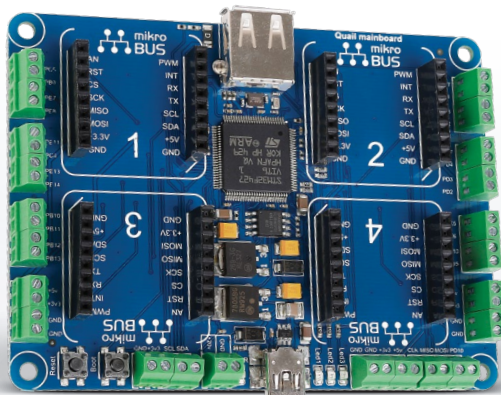
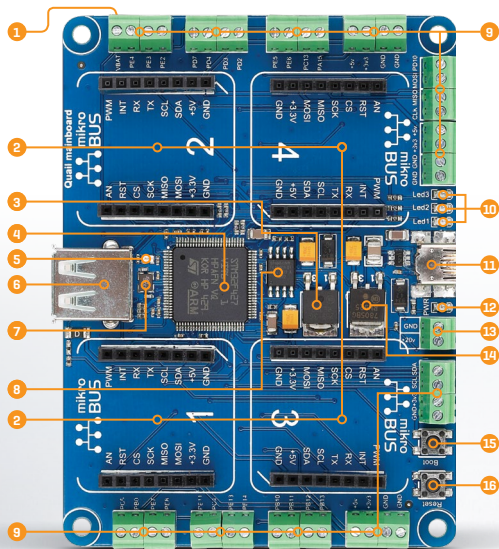


QUAIL

click™ boards meet .NET Micro framework



What's on board



- 1 RTC battery connector
- 2 mikroBUS™ sockets 1, 2, 3 and 4
- 3 3.3V voltage regulator
- 4 100pin STM32F427 MCU
- 5 32.768 KHz crystal oscillator
- 6 USB A connector
- 7 12 MHz crystal oscillator
- 8 Flash memory [64 Mbit]
- 9 Connecting terminals
- 10 Additional indication LEDs
- 11 USB Mini-B connector
- 12 Power indication LED
- 13 External power supply [+20V max]
- 14 5V voltage regulator
- 15 BOOT button
- 16 RESET button

System specification



power supply

via USB cable
[5V DC]



board dimensions

72 x 97 mm
[2.83 x 3.82 inch]



weight

= 50g



mikroBUS™

4 sockets
available

What is the Quail board?

Quail is a hardware development board equipped with four mikroBUS™ sockets and a 32-bit ARM® Cortex®-M4 STM32 microcontroller. The edges of the board are lined with screw terminals and USB ports for additional connectivity.

What's it for?

Quail offers a simplified way of developing hardware prototypes with C# managed code. It brings together MikroElektronika click™ boards and Microsoft's .NET Micro Framework for embedded devices (NETMF). MikroElektronika is constantly expanding the range of click™ boards to include all sorts of sensors, transceivers, displays... and the MikroBUS.NET team is supporting them with high-quality drivers to make them compatible with NETMF and the Microsoft Visual Studio IDE.



1. Install the required software

To start using Quail, download the following three pieces of software:

[The Microsoft .NET Micro Framework](#)

Open source platform that enables you to write managed C# code for embedded applications.

[www.netmf.com](#)

[Visual Studio Community 2013](#)

A full-featured free cross-platform IDE from Microsoft.

[www.visualstudio.com](#)

[MBN Core Assembly](#)

[www.mikrobustnet.org/downloads-2](#)

```
120 // Board's blue led
121 // <summary>
122 public OutputPort LedB;
123
124 private Int32 _clear;
125 private Int32 _red;
126 private Int32 _green;
127 private Int32 _blue;
128
129 private Gain _gain = Gain.v1;
130
131 // <summary>
132 // Initializes a new instance of the class cref="ColorClick"/> class.
133 // <summary>
134 // <param name="socket">The socket on which the Color Click board is plugged on mikroBUS.NET boards/</param>
135 // <param name="address">The address of the display. Default is 0x3C/</param>
136 // <param name="clockRate">The clock rate of the I2C device. Default is ClockRatesI2C.Clock100KHz. can also cref="ClockRatesI2C.Clock100KHz"
137 public ColorClick(Hardware.Socket socket, byte address = 0x3C, ClockRatesI2C.ClockRateRate = ClockRatesI2C.Clock100KHz)
138 {
139     Hardware.CheckPinsI2C(socket, socket.Int, socket.An, socket.Cs, socket.Pwr);
140
141     _config = new I2CDevice.Configuration(address, (int)clockRate);
142     Init();
143     LedB = new OutputPort(socket.An, false);
144     LedG = new OutputPort(socket.Cs, false);
145     LedB = new OutputPort(socket.Pwr, false);
146     var dataReady = new InterruptPort(socket.Int, false, Port.ResistorMode.Disabled, Port.InterruptMode.InterruptEdgeHigh);
```

Visual Studio Community 2013

2. Get the click™ boards and corresponding drivers

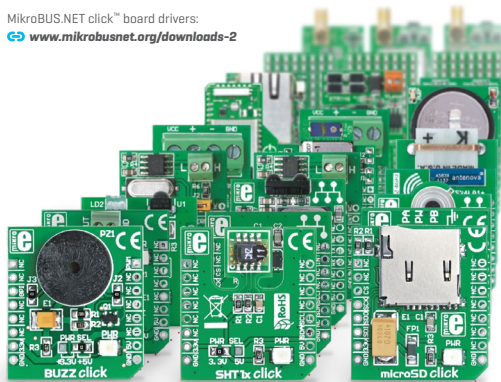
Buzzer, Relays, WiFi, RFid, OLED, Speech recognition - **you name it, we got it!** There are more than a hundred click™ boards available. About 50 are supported so far with mikroBUS.NET drivers. More drivers are coming up all the time but if you're in a hurry instructions for building your own drivers are also available.

All available click™ boards:

www.mikroe.com/click

MikroBUS.NET click™ board drivers:

www.mikrobussenet.org/downloads-2



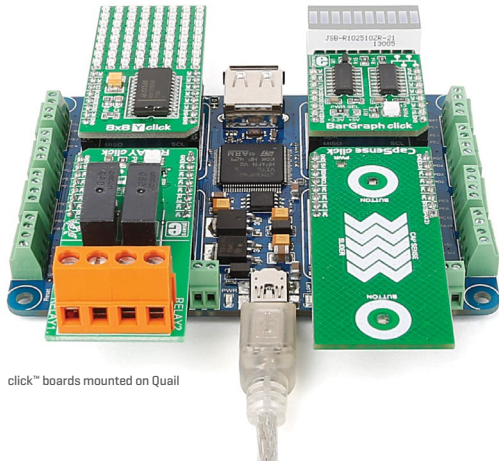
click™ add-on boards

3. Building your first application

After you're done setting up the development environment with steps 1 and 2, you are ready to start building your first application.

A detailed walkthrough on how to start a project in Visual Studio, include the necessary drivers and reference the needed assemblies in your source code is available at:

www.mikrobussenet.org/getting-started/writing-an-application



click™ boards mounted on Quail



MikroBUS
NET

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If you want to learn more about our products, please visit our web site at **www.mikroe.com**.

If you are experiencing some problems with any of our products or just need additional information, please place your ticket at **www.mikroe.com/support**.

If you have any questions, comments or business proposals, do not hesitate to contact us at **office@mikroe.com**

For more information and Quail-related updates directly from the MikroBUS.NET team, visit: **www.mikrobusnet.org/project/quail**

Quail Board manual
ver 2.00

