

# Vela

*Telescope Control System in the 21st century*



Wildcard  
Innovations

TERZAN 7  
GUIDE 7+4 0105

EXIT

ENTER

Argo Navis

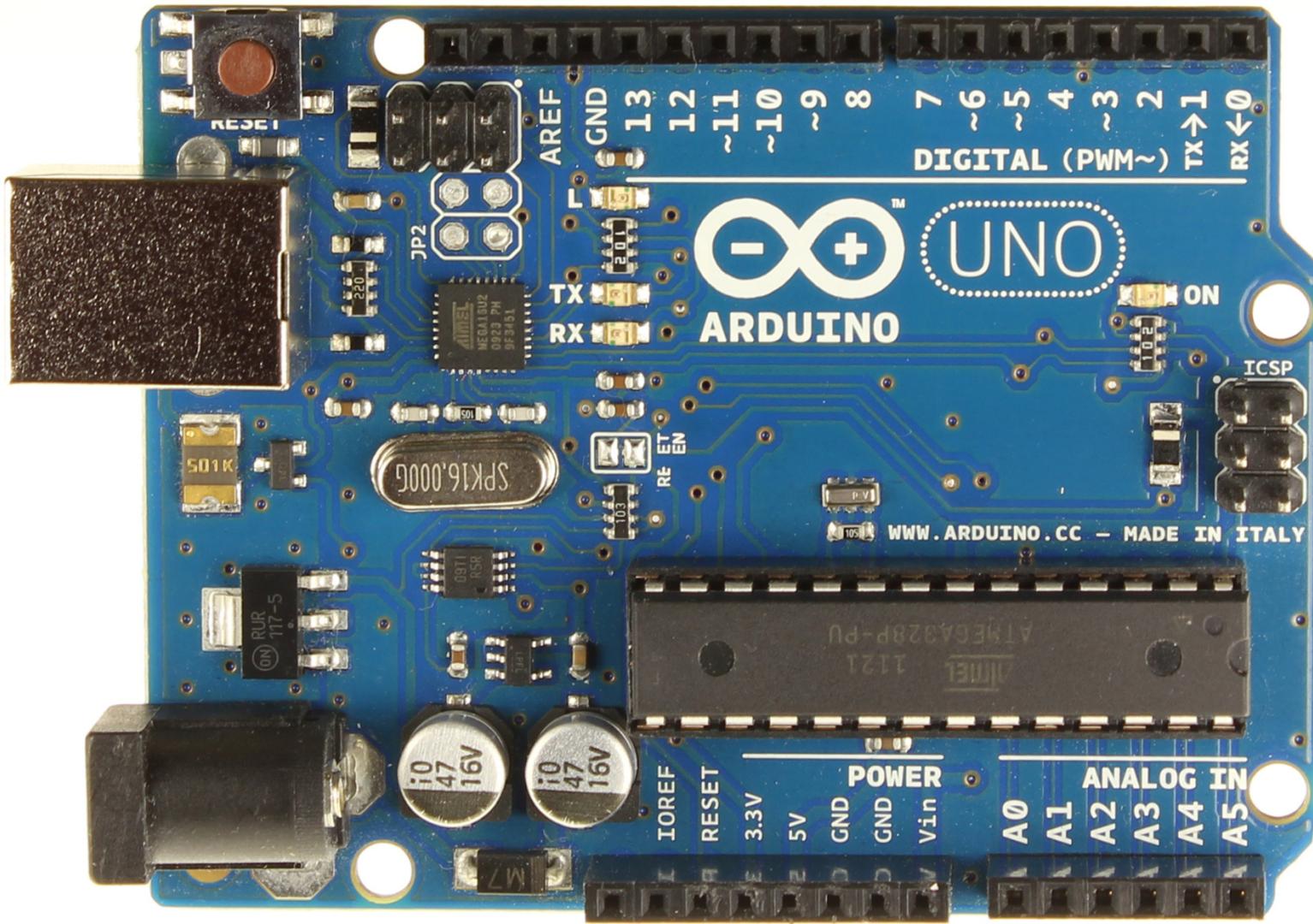
# Drawbacks

- Only settings circles
- No internet connection to upload new objects, lists, comets, ...
- Limited memory
- Expensive

# Going further

- Android smartphone / tablet ( $>= 4.3$ )
- Arduino hardware + Bluetooth shield
- Control
  - Mirror fan
  - Secundary mirror heating
  - Setting circles
  - Motors
- Inexpensive

→ Vela Telescope Control System



# Status

- <https://github.com/DeepskyLog/Vela>
- Connection with
  - DeepskyLog
  - Bluetooth on arduino

## ← Settings

### Primary mirror Fan

Select this if the fan for the primary mirror  
is connected.



### Connections

DeepskyLog

Bluetooth

## ← DeepskyLog Sign in

Login Name

Password

SIGN IN

1	2	3	4	5	6	7	8	9	0
q	w	e	r	t	y	u	i	o	p
a	s	d	f	g	h	j	k	l	
	z	x	c	v	b	n	m		
?123	,				.				



## ← DeepskyLog Sign in

Successfully logged in as Wim De Meester

LOG OUT

1 2 3 4 5 6 7 8 9 0  
q w e r t y u i o p

a s d f g h j k l

z x c v b n m 

?123 , . 





15:01

## ← Bluetooth connection

RSSI

---

Digital Out

Pin

[ 2 ]

write

NO

PWM

[ 3 ]

write

An app wants to turn on Bluetooth.

DENY

ALLOW



20°



15:01

## ← Bluetooth connection

RSSI

---

Digital Out

Pin  
[ 2 ]

write



PWM

[ 3 ]

write



CONNECT



# Next steps

- Write Arduino sketch to control fan
- Make hardware
- Release Vo.1

# Next steps: hardware

- Add temperature sensors
  - Air
  - Secondary mirror
  - Primary mirror
- Add heating
- Add Digital encoders
- Add motors

# Next steps: Software

- Add night mode
- DeepskyLog integration - offline
  - Use the objects
  - Use observing lists
  - Use list of locations to get weather and driving directions
  - Enter observations (Speech recognition?)
  - ...

# Next steps: Software

- DeepskyLog integration - online
  - Show all drawing of the object to observe
  - Show starcharts
  - Show observations
  - ...
- Track comets / asteroids / satellites